AWIPS SOFTWARE INSTALLATION INSTRUCTION NOTE 42
(for Electronic Systems Analysts)
Maintenance, Logistics, and Acquisition Division
W/OPS1: JS

SUBJECT	:	Release OB2 Installation Kit
PURPOSE	:	Provide ROB2 software installation instructions and information.
AFFECTED SITES	:	All National Weather Service CONUS and OCONUS WFOs/RFCs and offices with WFO/RFC type AWIPS systems must install ROB2.
PREINSTALLATION REQUIREMENTS	:	At a minimum, ROB1 must be installed. CONUS and OCONUS WFOs and offices with WFO type systems must install IFPS 13.2 before installing ROB2. In addition, the WFO Archive (WAX), RFC Archiver (RAX), and PX processors must be installed and running.
AUTHORIZATION	:	The authority for this modification is NWS Request for Change AB521.
VERIFICATION STATEMENT	:	These installation procedures were tested and verified at Silver Spring, MD (NMTR), Alaska Region Headquarters (VRH), Southern Region Headquarters (EHU), Central Region Headquarters (BCQ), Eastern Region Headquarters (VUY), WFO Tampa Bay FL (TBW), WFO Corpus Christi, TX (CRP), WFO Atlanta, GA (FFC), WFO Hastings, NE (GID), RFC Portland, OR (PTR), WFO Detroit, MI (DTX), OSF, OK (OSFW).
TIME REQUIRED	:	WFO installation time (Part 1-15) (see Attachment B, Installation Instructions for AWIPS ROB2) is approximately 6 to 8 hours, with 1 to 3 hours text data ingest down time. Part 0, the Pre-installation Requirements (see Attachment B, Installation Instructions for AWIPS ROB2) can take up to 6 hours for operational WFOs that use the Watch Warning Advisory Program (WWA) and 2 hours for everyone else. RFC installation time is about 7 hours, with approximately 1 to 3 hours text ingest down time.
SECURITY LEVEL	:	root
EFFECT ON OTHER INSTRUCTIONS	:	None.
TECHNICAL SUPPORT	:	For questions or problems regarding the upgrade, call the NCF at (301) 713-9344.
SPECIAL INSTRUCTIONS	:	Installation upgrade kit includes 3CDs, release notes, and script log output.

GENERAL:

The ROB2 installation upgrade kit includes: These installation instructions, and 3 CDs. Supplemental documentation includes release notes, and script log output (with error information). The length of the upgrade requires sites to go into service backup. ROB2 localization/customization problems will be similar to those experienced in the ROB1 upgrade.

NOTE: 1. Pre-installation requirements:

a. ROB1 **must** be installed prior to installing ROB2.
b. CONUS and OCONUS WFOs and offices with WFO type systems **must** install at least IFPS 13.2 before installing ROB2.
c. LINUX Workstation Upgrade Part 4 (see attachment B, Installation Instructions for AWIPS ROB2) should only be performed if the workstations are assigned as lx1 or lx2.
d. The WFO Archive Server (WAX) is installed and running on WFO systems.
e. The RFC Archive Server (RAX) is installed and running on RFC systems.
f. The PX processors should be installed and running.

2 Sites **must** coordinate the ROB2 installation with their regional or NCEP Center AWIPS focal point. COMT, systems at WSH, and the ROC should schedule their upgrade with Frank Lucadamo at WSH or schedule themselves using the calendar feature on Netscape set aside for AWIPS software upgrades.

3. Adhere to the guidelines outlined below.

4. AWIPS regional focal points **must** coordinate the ROB2 installation using the Netscape calendar set aside for AWIPS software upgrades:

http://calendar.netscape.com

5. AWIPS remote displays (ARD) cannot be logged into AWIPS during this install. Sites must coordinate with their CWSUs before initiating the ROB2 upgrade. As noted above, the ROB2 upgrade must be coordinated with the appropriate personnel. Avoid the following scenarios:

a. Sites and their backups **must not** perform simultaneous software upgrades.

b. Weather wire uplink sites and their backups **must not** perform simultaneous software upgrades.

GENERAL INSTALLATION GUIDELINES

1. NCF/NGIT upgrade support is available from 7AM to 7PM ET, Monday through Thursday.

    - OCONUS sites requiring upgrade assistance outside the set support hours on Thursdays, must coordinate through their AWIPS regional focal point. If the NCF/NGIT is not advised ahead of time, they will assume a scheduled OCONUS site will follow the set support hours.

2. Install support of a maximum number of **five sites per install day** will be available for the **ROB2** upgrade.

3. All sites must install ROB2 by the end of October 2003.

Review these instructions before performing the upgrade. It is important to do Part 0, the Pre-installation Requirements (see Attachment B, Installation Instructions for AWIPS ROB2) several days to a week before the upgrade. This can take 6 hours or more for operational WFOs that use the WWA program and 2 hours for everyone else. The reason for the discrepancy in time is that sites that use WWA must obtain the new WWA templates and customize them several days before the upgrade.

If any of these instructions require further clarification, call the NCF.

REPORTING MODIFICATION

Report the completed software installation using the Engineering management Reporting System (EMRS) according to the instructions in the NWS Instruction 30-2104, Maintenance Documentation, Part 4, and Appendix H. A sample EMRS report is attached. As an additional guide, use the information in the table below.

Block #	Block Type	Information
5	Description	Upgrade AWIPS Software to ROB2 I.A.W. AWIPS Software Installation Instruction Note 42
7	Equipment Code	AWIPS
8	Serial Number	1
15	Comments	Upgraded AWIPS System Software to ROB2 I.A.W. AWIPS Software Installation Instruction Note 42
17a	Mod. No.	42

? Signature Not Verified

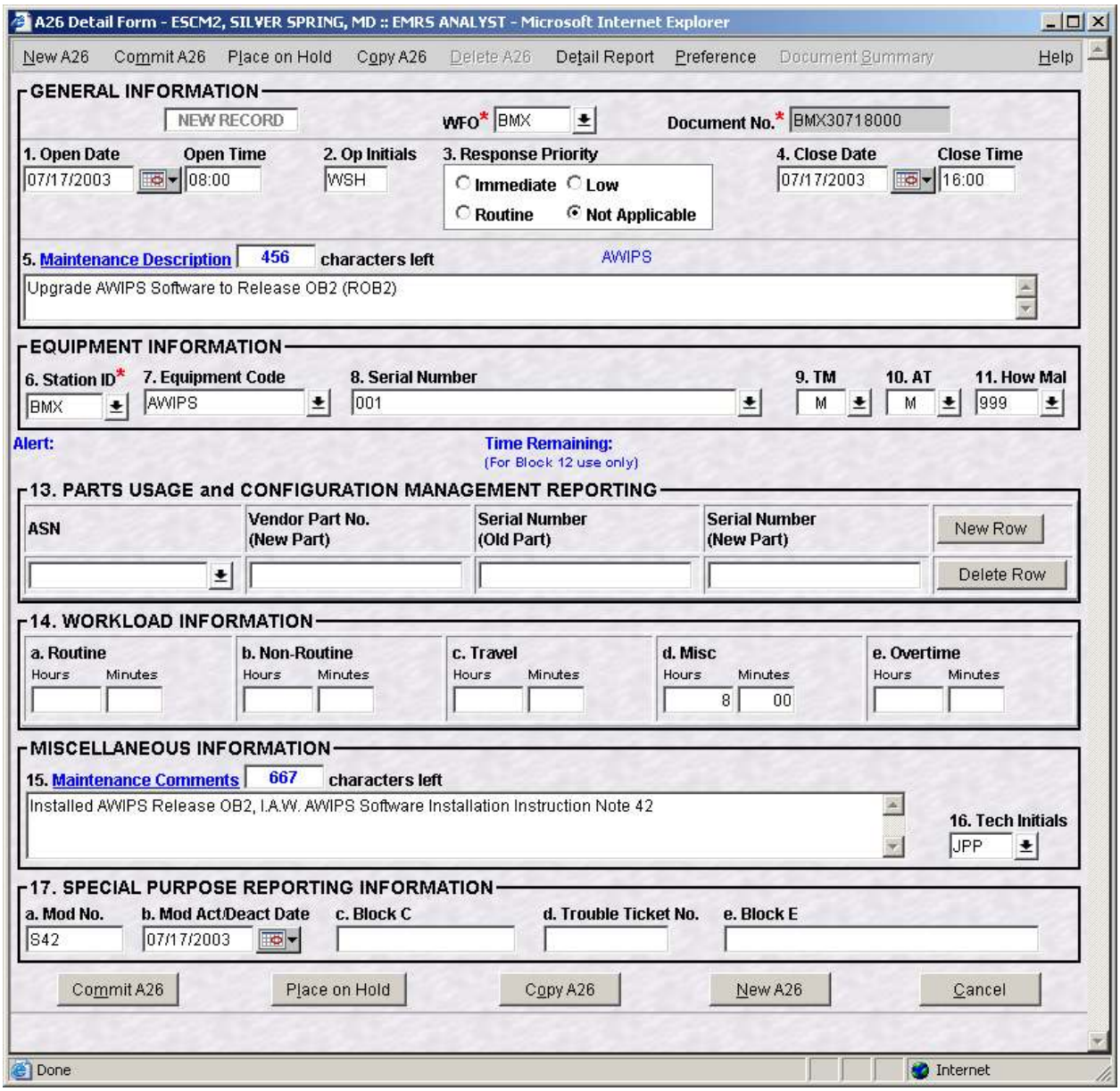
Mark S. Paese

Digitally signed by Mark S. Paese
DN: cn=Mark S. Paese, o=DOC/NOAA/NWS, c=US
Date: 2003.08.04 16:30:56 -04'00'

Mark S. Paese
Director, Maintenance, Logistics, and Acquisition Division

Attachment A - Sample EMRS Report
Attachment B - Installation Instructions for AWIPS Release OB2

Attachment A - Sample EMRS Report



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Attachment B

Installation Instructions for AWIPS Release OB2

Installation Instructions for AWIPS Release OB2

Please Call the NCF before you install OB2
PLEASE READ ENTIRE DOCUMENT BEFORE BEGINNING!

The OB2 install will take 6 to 8 hours (Parts 1-15) to complete, depending upon the number of workstations. Part 0 (Pre-installation requirements) will take up to 6 hours for Operational WFOs that use the Watch Warning Advisory (WWA) program and 2 hours for everyone else. It should be done several days before the upgrade. Operational WFOs that do Part 0 step 10 to obtain the WWA templates and customize them must do so well in advance of the upgrade.

On the day of the install (Parts 1-15), call the NCF and tell them that you are doing the OB2 upgrade; give them the version date of the installation instructions. Coordinate with your service backup sites, as needed. After this, do the upgrade.

NOTE 1: **The text data ingest downtime will be 1 to 3 hours. Model data will be queued up by the PXs during the upgrade and should not be lost.**

NOTE 2: **The system should be available to use about 7 hours after starting the upgrade.**

NOTE 3: **After-Install Procedures (Part 15 on page 15-1) must be done at all sites as part of the OB2 upgrade. Steps 1-7 should be completed on the day of the install, as appropriate. The procedures include:**

1. **LDAD Post Install Procedures**
2. **OH Post install Procedures**
3. **Omniback Instructions**
4. **Maintenance Release(s) for OB2 (if applicable)**
5. **Miscellaneous Post install procedures**
6. **Hourly Weather Roundup (HWR) procedure**
7. **Rerun localization for your backup sites**
8. **Operational WFOs that use WarnGen need to customize their templates, train the staff, and activate the new templates**
9. **Secure a Good Level 0 Archive as a Backup**
10. **Secure a Good LDAD Backup**
11. **Checking DS Server Failover Configuration**

NOTE 4: **OB2 will remove the Old Radar Archiver Software. Therefore, any saved data you wish to keep will need to be restored from Omniback, and saved elsewhere.**

NOTE 5: **DO NOT use <CTL-C> to stop installation scripts during the install.**

NOTE 6: **DO NOT PROCEED if any unexpected problems are encountered. Instead, contact the NCF immediately before taking any action.**

Preface

- OB2 will remove the Old Radar Archiver Software. So, any saved data you wish to keep will need to be restored from Omniback, and saved elsewhere.

- A main feature of the OB2 upgrade is that the site localization is done on lx1, not ds1. The localization is then pushed everywhere else. In previous upgrades, the localization was done on ds1 then pushed to the other devices (i.e. ds2, as1, as2, ws#). This change means that localization-related files on lx1 must be in "baseline condition" or else a corrupt localization will be propagated throughout.

- **Operational WFOs that have customized "Watch Warning Advisory" (WWA) and WWA NWR templates** should plan to download the updated OB2 WWA templates before doing the OB2 upgrade and merge local customizations into them. On the day of the OB2 upgrade these customized OB2 templates will be placed into the data/fxa/customFiles directory and will be used during the OB2 localization, therefore making them operational.

IMPORTANT
The customization of the OB2 WWA templates before the upgrade will take a **considerable amount of time** and operational WFOs should do this well in advance of the OB2 upgrade.

In OB2, there are also a number of changes to the SPS and HWO products to segmented format.

Part 0, 10 and Attachment "e" contains information on how to obtain the templates ahead of time.

It is **extremely important** that you to go to the following webpage and review a document entitled ***"Watch, Warning, Advisory (WWA) Application Information Summary....New Features and Functions in AWIPS Build OB2*** *(WWA-OB2-000-NEW)."* It summarizes the new WWA features in AWIPS Build OB2 and should be read before the upgrade by the meteorologist forecasters as well as the person installing the OB2 software. This document also describes the changes made to WWA templates in OB2 which you will need to become familiar with before you modify your templates.

http://www.nws.noaa.gov/mdl/wwa/docs/WWA-OB2-000-NEW.pdf

Another document you may want to look at has the release notes for WWA. It gives a detailed description of every change made in WWA. The document is found at:

http://www.nws.noaa.gov/mdl/wwa/new_OB2.htm

- **Operational WFOs that use WarnGen** will want to become familiar with the WarnGen changes made in OB2 well in advance of the OB2 upgrade. There are three major new features being added to WarnGen in OB2. These are:

  a. a formalized methodology for issuing continuations, cancellations, expirations and corrections,
  b. VTEC, and
  c. new more vigorous format checking (QC).

  These additional features have required the default templates to change. The following 3 web pages will provide background information on some of the OB2 WarnGen changes.

  1. The list of the templates being delivered in OB2 is found at:

     http://www-sdd.fsl.noaa.gov/~ramer/noaa/ob2-wgn/templates.html

  After the OB2 upgrade, the "followup messaging" capability (see "a", above) will be on the WarnGen menu and "active" if OB2 templates are used to create messages. The following are two web pages worth reviewing:

  2. *Display examples for OB2 warnGen* and has useful screen captures:

     http://www-sdd.fsl.noaa.gov/~ramer/noaa/ob2-wgn/ob2-wgn.html

  3. *The Followup Capability in WarnGen* and describes the new "followup messaging" feature in OB2:

     http://www-sdd.fsl.noaa.gov/~ramer/noaa/ob2-wgn/followUp.html

  The installation strategy for WarnGen templates is different than the one you will be using for the Watch Warning Advisory (WWA) templates. In order to allow a site time to become familiar with some of the new features in WarnGen, we want the OB1 WarnGen templates to be "active" after the OB2 upgrade. This means we want to ensure, as much as possible, that immediately after the OB2 install, AWIPS will initially be configured to use all OB1 WarnGen templates. We want this to be the case even though the new OB2 templates will reside in the data/fxa/nationalData directory after the OB2 upgrade.

  To have OB1 WarnGen templates active after the OB2 upgrade, a pre-installation procedure (see part 0, step 11 and attachment "f") will be needed. This includes:

a) Each operational WFO copying by hand any WarnGen templates used for full service backup from localization/LLL into /data/fxa/customFiles, if the site has any, and

b) Running a script written by FSL which copies any **non-customized** baseline WarnGen templates from data/fxa/nationalData/ into data/fxa/customFiles.

- OpenSSH v. 3.6.1 will be installed in OB2 (on all HP and Linux machines). No AWIPS software, however, will actually use it in OB2. Receiving this software at this time will give sites a chance to become familiar with ssh before we replace rlogin/remsh/ftp/telnet with the ssh utilities in OB4. The ssh software is installed on the Linux boxes and it came with Red Hat. Some sites may already be using it. As part of the Linux installation the old sshd server will be stopped and disabled and the new one started. The old ssh client will be disabled. Users may have to regenerate some keys after the OB2 upgrade.

Table of Contents

PART 0: Pre-installation Requirements (complete before day of install)

Important: Read and perform all of the following steps as applicable in Part 0 **several days or more** before doing the rest of the OB2 upgrade.

1. **Prerequisites**. The following list describes items that the OB2 install expects to have in place before the upgrade begins.

   - At least the OB1 major release has been installed.
   - At least the IFPS 13.2 release has been installed at WFO type systems.
   - WFO Archive Server (WAX) is installed and running on WFO systems.
   - RFC Archive Server (RAX) is installed and running on RFC systems.
   - The PX Pre-processors are installed and running.
   - WFO type sites should install AVNFPS version 1.0. Sites that use AVNFPS should have version 1.0 (released in late July) installed. OB2 sites without AVNFPS version 1.0 will find their version of AVNFPS will operate but the setup GUI will not work. This means that after the OB2 upgrade, you will not be able to change your setup.
   - **Assumption:** In Part 4, it is assumed that both LX1 and LX2 are installed and operating. If **both** are not hooked up and running ROB1.x, the script "installLXOB2.sh" will fail. If the site does not have both LX1 and LX2 installed, the installLXOB2.sh script will need to be modified. (Your NGIT install point of contact for the upgrade can help, if necessary.)

2. **Coordination**. You will need to coordinate your upgrade with other sites, if applicable.

   - Coordinate your install date with your backup site(s).
   - If you are a Weather Wire uplink site, ensure (through your Regional Focal Point) that your backup Weather Wire uplink site(s) are not also doing the upgrade concurently.
   - If you have a CWSU with its LINUX box attached to one of your AWIPS Workstations (WS), ensure you coordinate the install with the CWSU since they won't be able to use their system while you upgrade to OB2.

3. **Check for Lessons Learned/Addendum**. After implementation of OB2 begins and several early deployment sites complete their upgrade, some will have comments, additions, and clarifications to this document. For this reason, a lessons learned/ addendum document will be created and posted to http://www.ops1.nws.noaa.gov/awips_softwre.htm. This document will be updated frequently during the first few weeks of deployment. You should check the webpage to see if it exists, and if it does, download it and combine it with this document. Also, you should check the webpage again shortly before your actual upgrade to see if a more updated version is available.

4. **Download Files**. You will need to download a number of files, including NDM files and scripts from the noaa1 server before the installation of OB2. They will be placed in a safe directory until install day and then be moved to their proper location just before installation. In Part 4, you will run the moveob2files.sh script to copy the appropriate files into place. The following tables lists the files and their final directory location. Specific instructions on downloading the files are listed below the tables. **If you have made any localized changes to these files on your system, you will need to merge those into the downloaded files before install day.** Note: Send NDM changes that are applicable to the national datasets to Fran Curnow (*frances.curnow@noaa.gov*)

Filename	Directory Location at NOAA1 server before download	Final directory location after upgrade
dataInfo.manual	/pub/ndm/OB2	/data/fxa/nationalData
depictInfo.manual	/pub/ndm/OB2	/data/fxa/nationalData
productButtonInfo.txt	/pub/ndm/OB2	/data/fxa/nationalData
textNNNhelp.txt	/pub/ndm/OB2	/awips/fxa/data
textCategoryClass.txt	/pub/ndm/OB2	/awips/fxa/data
moveob2files.sh	/pub/BuildOB2	/data/local/nationalData
AWIPScheckout.sh	/pub/BuildOB2	/home/awipsadm/install

Download procedure:

A. From a HP graphics workstation, log in as root, open a telnet window, and log into DS1 as root.

```
rlogin ds1
```

B. Go to the "/data/local/nationalData" directory.

```
cd /data/local/nationalData
```

If this directory doesn't exist, create it by using the **`mkdir`** command.

If the directory does exist, use the list command to ensure that the files you downloaded in ROB1 were deleted during the ROB1 upgrade. If not, **delete those files now**.

```
ll /data/local/nationalData
rm /data/local/nationalData/*
```

C. Connect to the NOAA1 ftp server by entering the command:

```
ftp 165.92.25.15
```

Once you are connected to the NOAA1 ftp server, login as user **ftp**, with your email address as the password.

D. Get the national data and other files from the NOAA1 ftp server by entering:

1. **binary**
2. **hash**
3. **prompt** *(Use this only if you don't want to get prompts for each file)*
4. **cd /pub/BuildOB2**
5. **mget *** *(You should receive 2 files from this command)*
6. **cd /pub/ndm/OB2**
7. **mget *** *(You should receive 5 files from this command)*
8. **bye**

E. Set permissions and relocate scripts. You will use the move command since we won't need them in the /data/local/nationalData directory anymore.

1. **chmod 755 *sh**
2. **mv AWIPScheckout.sh /home/awipsadm/install**

5. **System Check using AWIPScheckout.sh** This script has been updated in OB2. It will perform several checks that are needed before installation. As you run the script, output will be displayed on the screen, printed out, and written to three different files for further reference. Another script, called **check_process**, will be created when you run AWIPScheckout. This **check_process** script will be used in Part 7 on the day of install.

A. Assuming that you are still logged into DS1 as root, change directories and run the following script.

```
cd /home/awipsadm/install
./AWIPScheckout.sh
```

B. Using the output (either from the screen, printer, or file), verify the following items. If you run into a problem, call the NCF.

1. **Verify connectivity to all machines.**
   Output should be: *as1 as2 ds1 ds2 ws1-<site> ws2-<site>* etc.
   If you do not see the LDAD server (ls1) or other workstations responding, please check the non-responding system(s).

2. **Check Swap Packages.** The system should be in "normal" operation with no swap packages failed over.

   Output should be: *All packages on primary*

   If all packages are not on primary or enabled, please check and correct the appropriate packages.

3. **Check Release ID.** The Release ID must be at least OB1 or greater.

4. **Check localization variables.** Verify that the site is localized correctly. Output should list your SITE_TYPE, FXA_LOCAL_SITE, FXA_INGEST_SITE, FXA_LOCAL_TZ, NODE (on WFO only), and the current satellite feed.

5. **Check for unsuccessful localizations.** If your site has performed an unsuccessful localization, a file called **.unSafe** was written to **/awips/fxa/data/localizationDataSets/LLL** on LX1, LX2, and DS1. If this file exists, it must be deleted before the install begins.

   Output should be: *no .unSafe file detected*

   If an .unSafe file exists, you must manually delete it.

6. **Check IFPS version (applies to WFO type systems only).** If your site is a WFO system, the script will display the latest version you have installed.

   An example of the output is below:

   rap_name *rap_version install_time*

   IFPS12.3 *12.3 2003_02_11 14:20:48*
   IFPS13.2 *13.2 2003_04_18 17:44:02*

   The last entry is the IFPS version most recently installed on your system, which in this example, is 13.2. **You must have at least IFPS13.2 in order to install the AWIPS OB2 Release.**

7. **Check partition sizes.** It is important that you verify that the system has an appropriate percentage of disk space available on each server and workstation before you perform the OB2 install. If disk space is not reduced to the recommended percentage, parts of the install could fail for lack of needed space. **For the OB2 release, most partitions should be no more than 85% used.** The output from this section, if any, will list

partitions that will need to be reduced. There is also a separate file, /home/ncfuser/**AWIPScheckout<timestamp>.bdf**, that lists all partitions and space used. This file can also be used for further reference. The following list specifies the maximum used space:

For DS1, DS2, AS1, AS2, and all workstations

A. "/" (root) file system should be no more than **85%** used.
B. "/awips/hydroapps" should be no more than **85%** used.
C. "/awips/adapt" should be no more than **85%** used. (WFO only)
D. "/awips/fxa" should be no more than **85%** used.

For LS1

A. "/var" should be no more than **85%** used.
B. "/ldad" should be no more than **85%** used.

If you need to reduce space, try to delete or move duplicate files, core files, and files from previous releases. You should also check for old backup subdirectories and files and remove them. You might also consider moving files such as locally acquired satellite and grids into the "/data/local" subdirectory.

If "/awips/fxa" is above the allowable percentages **on the servers (ds1, ds2, as1, as2),** you can login as root to the appropriate server, and then run the commands in the following box to reduce space. (*This script will delete some localization files that are not needed on the servers. If you run the script, you might see some 'cannot stat' or similar type errors. You can ignore these.*)

```
export FXA_HOME=/awips/fxa
.  /awips/fxa/readenv.sh
/awips/fxa/bin/cleanup_localization.sh
bdf /awips/fxa
```

8. **Check localization files.**

During the OB2 installation, a full localization will be run on **lx1** and then the results will be pushed out to the other servers and workstations. As a consequence, you might get unsatisfactory results if you have different localization files on each system. You should review the **/home/ncfuser/AWIPScheckout<date>.localfiles** and make any necessary changes. In addition, localization scripts choose files from directories in a certain order of preference:

A. /data/fxa/customFiles/<filename>
B. /awips/fxa/data/localization/<site_id>/<site_id>-<filename>

C. National templates under various directories (e.g., /awips/fxa/data)

Therefore, you should also check to ensure that your intended active file is not overridden by an identically named file in a higher priority directory. You may wish to consult with your on-site localization expert for more information.

9. **Check informix status.** Verify that your Informix server is primary, online and replicating.

10. **Verify the model of the DS.** The model of the DS should be output in this section. You will use this information when you are loading each cd during the installation.

6. **Manual file backup information.** These include the following:

- Customized awipsusr crons on any workstations should be saved to a safe directory.
- Customized local rps lists in /data/fxa/radar/lists. Various rps lists in /data/fxa/radar/lists will get recreated during radar localization. You may wish to save a backup copy in /data/fxa/rps-lists if you have customized changes. Examine section 1 through 3 of attachment "g" entitled **Preserving RPS List** for more information on preserving rps lists.
- Secure a good LDAD backup a week or so before the upgrade. Use System Administration Note 15 entitled "LDAD Backup and Restore Procedure." This document, when finalized and signed, will be placed on the following web page:
  http://www.oso3.nws.noaa.gov/awips_new.htm
  Until the note is signed, use **Attachment "h"** ***Backing up your LDAD server's disk***.
- OB2 will remove the Old Radar Archiver Software. So, any saved data you wish to keep will need to be restored from Omniback, and saved elsewhere.

7. **Automatic file backup and restore information.** Unless told otherwise, the following lists files from each part of the installation that are automatically backed up and restored during the installation. However, you may wish to manually back up other files that are specifically stated that they will not be saved off.

- In Part 2, Install Archiver Software:

  The /etc/rc.d/rc.local will be saved off.

- In Part 3, Install CP Software, no files will be saved off.

- In Part 4, OB2 install on Linux workstations LX1/LX2

  No files will be saved off.

- In Part 5, Install Release OB2 LDAD Software:

  The ROB1 versions of files mentioned in Attachment “a” section B, will be saved off to /px2data/BACKUPLDADOB1 by the script called installLDADOB2. The OB2 versions of these files will become operational.

- Part 6, MSAS

  MSAS files listed in Attachment "a," part C will be updated. The replaced files will be saved to /data/fxa/BACKUPMSASOB1.

- Part 7, OB2 Pre-install <u>nothing will be saved off.</u>

  During the OB2 upgrade, the crontab files (listed below) on the DS1, DS2, AS1, AS2, will be replaced. Please note that the swap package crontab files will also be replaced during the upgrade.

  <u>Important Note:</u> A backup copy of these files will **<u>not</u>** be saved off. We highly recommend that you save these off.

  /var/spool/cron/crontabs/informix
  /var/spool/cron/crontabs/ifps
  /var/spool/cron/crontabs/ldad
  /var/spool/cron/crontabs/root
  /var/spool/cron/crontabs/fxa
  /var/spool/cron/crontabs/oper

- In Part 8, Install OB2 LAPS

  No files will be saved off.

- In Part 9, Install Release OB2 Hydrology Software

  NOTE: **<u>RFC</u>** type systems will see the following HP/Linux type questions which they need to answer.

  Remember that R23.0 is being delivered in OB2. When RFC sites answer the following questions, a "y" means copy back your pre-OB2 version instead of keeping the delivered R23.0 version.

  Do you want to replace Linux nwsrfs with saved off version (y/n)
  Do you want to replace Linux ffg with saved off version (y/n)
  Do you want to replace Linux verify with saved off version (y/n)
  Do you want to replace Linux xdat, xnav, and xsets R20.0 with saved off version

Do you want to replace HP grib with saved off version (y/n)
Do you want to replace HP nwsrfs with saved off version (y/n)
Do you want to replace HP ffg with saved off version (y/n)
Do you want to replace HP send_rfc with saved off version (y/n)
Do you want to replace HP verify with saved off version (y/n)
Do you want to replace HP xdat, xnav, and xsets with saved off version (y/n)

- In Part 10, Install Release OB2 ADAPT Software:

  Nothing will be saved off.

- In Part 11, Install NMAP.

  The oldest version of NMAP (located in $NMAP_DIR/old) will be removed. The current version will be moved to $NMAP_DIR/old. The OB2 version will be installed in $NMAP_DIR/current.

- In Part 12, FXA/System Software, no files will be saved off.

- In Part 13 OB2 post install, no files will be saved off.

- In Part 14, Install PX Software, no files will be saved off.

8. A. **Information on obtaining data during the upgrade *Optional*.** Attachment "b" outlines a method for obtaining data through the WAN during your upgrade on installation day.

   B. **Information on freeware and COTS changes.** These can be found in Attachment "d".

9. **Removing Alpha/beta test Software.**

If you have been testing alpha/beta software or patches, generally, these patches need to be removed before the OB2 upgrade.

IMPORTANT

WFOs: DTW, BOX, MOB, LOX, EYW or other SAFESEAS test sites must uninstall SAFESEAS

Several sites have installed the SAFESEAS software on top of OB1. These sites must removed this software before installing OB2. The directions for uninstalling SAFESEAS are on the SAFESEAS web site:

http://www.nws.noaa.gov/mdl/safeseas/safeseas_unistallation.htm

10. **Operational WFOs that use the "Watch Warning Advisory (WWA)" application** should obtain the OB2 WWA and WWA NWR templates at this time and customize them.

Note: In OB2 a number of updated WWA and WWA NWR templates are being delivered on the OB2 CDs. These templates are also available on the NOAA1 server. WFOs that have made customizations to existing WWA templates should obtain the new templates before the OB2 upgrade and add their customized changes. See step 2 below.

1) Before downloading the WWA templates , you should review a document entitled ***"Watch, Warning, Advisory (WWA) Application Information Summary....New Features and Functions in AWIPS Build OB2 (WWA-OB2-000-NEW)."*** It summarizes the new features in WWA for AWIPS Build OB2. This document, which is found on the web page below, also describes the changes made to the WWA templates in OB2. You will want to become familiar with this before you modify your templates.

http://www.nws.noaa.gov/mdl/wwa/docs/WWA-OB2-000-NEW.pdf

A second document you might want to look as is the release notes for WWA. It gives a detailed description of every change made in WWA. The document is found at:

http://www.nws.noaa.gov/mdl/wwa/new_OB2.htm

2) **To obtain the OB2 WWA templates do the following:**

Critical....operational WFOs must do this

Go to attachment "e" for details on how to download the Watch Warning Advisory (WWA) templates before the OB2 upgrade.

11. **Operational WFOs that use WarnGen**

a. As a precaution, please save off to a safe place any of your site's customized WarnGen templates. In addition, save off to a safe place your service backup' sites customized templates, if you have any.

b. Operational WFOs that use WarnGen will need to become familiar with the WarnGen changes made in OB2. These changes will result in a number of WarnGen templates being delivered in OB2. Web pages with background information on some of the WarnGen changes in OB2 are found in the Preface of this document.

c. The install strategy for WarnGen templates is different than the one we will use for the Watch Warning Advisory (WWA) templates. Immediately after the OB2 install, AWIPS will initially be configured to use all OB1 templates operationally. **To ensure this happens you must do the following**:

> ## Critical....operational WFOs must do this
>
> **To ensure that the OB1 templates are still in use after the OB2 upgrade, Operational WFOs must to go to Attachment "f" and do the procedure outlined.**

12. **Check Delivered CDs before the upgrade to ensure they have no problems.**

> ## IMPORTANT
>
> Step 12 needs the OB2 CDs to complete. It essential that you not forget to do this step!!

You received an install package containing 3 CDs. These names are listed below:

a. **LDAD, MSAS, LAPS, OH, FREEWARE**
b. **ADAPT, NMAP, WFOA, NGIT UX**
c. **Linux WFO-A, Linux NGIT**

> ## IMPORTANT
>
> **Examine all CDs to ensure they are physically okay.** The install CDs can be tested as follows:

A We assume that you are still logged into DS1 as root. Insert the CD labeled "LDAD, MSAS, LAPS, OH, FREEWARE" into CD-ROM drive on DS1. Verify that the /cdrom directory exists.

```
ll /cdrom
```

If it does not exist, type:

```
mkdir /cdrom
```

B Use the appropriate command to mount the CD-ROM in the root directory on DS1:

For K class server:

```
mount /dev/dsk/c3t2d0 /cdrom
```

For D class server:

```
mount /dev/dsk/c1t2d0 /cdrom
```

NOTE: If you don't remember which class server you have, type:

```
model
```

C Use the list command to ensure that you can list what is on the CD.

```
cd /cdrom
ll
```

D Un-mount the "LDAD, MSAS, LAPS, OH, FREEWARE" CD:

```
cd /
fuser -k /cdrom
umount /cdrom
```

E Repeat steps A-D with the second CD (ADAPT, NMAP, WFOA, NGIT UX) and finally with the third CD (Linux WFO-A, Linux NGIT).

13. The OB2 upgrade will remove the Old Radar Archiver Software. As a result, if you have a customized version of the "radar menu" (radarDataMenus.template), you will need to remove the "archive button" from the radar menu. If you do not, the "archive button" will remain active after the OB2 upgrade. This would be a problem because we found in OB2 alpha test sites that if the "archive button" is still present after the OB2 upgrade, **D2D will not start up**.

    Note that if you do not have a customized version of the radar menu, you should not have a problem because an updated "radar menu" without the archive button is being delivered in OB2.

14. OpenSSH v. 3.6.1 will be installed in OB2 (on all HP and Linux machines). No AWIPS software, however, will actually use it in OB2. Receiving this software at this time will give sites a chance to get familiar with ssh before we replace rlogin/remsh/ftp/telnet with the ssh utilities in OB4. The ssh software is installed on the Linux boxes and it came with Red Hat. Some sites may already be using it. As part of the Linux installation the old sshd server will be stopped and disabled and the new one started up. The old ssh client will be disabled. Sites presently using OpenSSH may have to regenerate some

keys after the OB2 upgrade.

15. **Potential non-baselined "lx" platform issues exist for the following sites**: ntcd, box, vuy, sew, acr, afc, vrh, afg, ajk, sgx, and lkn.

    Two additional sites ffc and rsa will be ok if the extra "lx" entries on the ds1 /etc/hosts file remain commented out. RFC msr is also an acceptable "special case" situation.

    The above sites, except where noted, could have some OB2 install issues because one or more scripts will look for a prefix of "lx" before performing various commands. As of June 3, 2003, the sites listed above have non baselined "lx" platforms. For non baselined (ie, other than lx1 and lx2) linux boxes, sites should be using a name with a prefix such as "na" or "wfo", "rfc", "site", etc. If the names are not changed, the OB2 install scripts will copy software to these devices which sites may or may not want.

16. As mentioned earlier, a main feature of the OB2 upgrade is that the site localization is done on lx1, not ds1. The localization results are then pushed everywhere else. In previous upgrades, the localization was done on ds1 then pushed to the other devices (i.e. ds2, as1, as2, ws#). This change means that localization-related files on lx1 must be in "baseline condition" or else a corrupt localization will be propagated throughout.

    For example, we highly recommend that you take the following files from ds1:

    a. /awips/fxa/data/localization/LLL/LLL-hydroSiteConfig.txt
    b. /awips/fxa/data/localization/LLL/LLL-acqPatternAddOns.txt
    c. Ds1 version of awips/fxa/localization/LLL/LLL-portinfo.txt

    and move them into the data/fxa/customFiles directory. This will ensure these files are available for not only OB2 but OB3 and beyond. After placing them into customFiles be sure to remove them from localization/LLL.

PART 1: Install Day Procedures

1. Contact the NCF and tell them you are doing the OB2 upgrade.

2. Send a free text message to users of radar information that it will not be available during the OB2 upgrade.

3. Initiate service backup, if applicable, and advise your backup site(s) that you are beginning the OB2 installation.

4. Stop any **customized awipsuser** crons on the workstations, if applicable. Do a telnet as **awipsusr** to each applicable workstation and do a **`crontab -r`**

5. Terminate and exit all D2D sessions, text and graphics workstations, AWIPS applications, the CWSU LINUX applications (if applicable), and any site specific applications that run via crons on all graphic and text workstations.

   Note: If you are hosting a CWSU LINUX connection, we suggest that the CWSU log out of D2D on their end and that you unplug the wire to Port 16 on the waveswitch on your system. The latter is needed to ensure that the CWSU does not log back in, by mistake, during the upgrade.

6. Log out of AWIPS LINUX lx1/lx2 boxes.

7. If your site is a data feed to the FAA, don't forget to contact your FAA site.

8. If you are a Weather Wire uplink site, contact Dyncorp, if necessary.

9. **System Check using AWIPScheckout.sh** This script has been updated in OB2. It will perform several checks that are needed before installation. As you run the script, output will be displayed on the screen, printed out, and written to three different files for further reference. Another script, called **check_process**, will be created when you run AWIPScheckout. This **check_process** script will be used in Part 7 on the day of install.

   A. From a HP graphics workstation, log in as **root** (**not as awipsusr! If you log in as awipsusr, your window will be killed in Part 7 and you will have to start Part 7 over.**) Open a telnet window, and login to the DS1 as root.

      ```
      rlogin ds1
      ```

      Next, change directories and run the script.

      ```
      cd /home/awipsadm/install
      ./AWIPScheckout.sh
      ```

B. Using the output (either from the screen, printer, or file), verify the following items. If you run into a problem, call the NCF.

1. **Verify connectivity to all machines.**
   Output should be: *as1 as2 ds1 ds2 ws1-<site> ws2-<site>* etc.
   If you do not see the LDAD server (ls1) or other workstations responding, please check the non-responding system(s).

2. **Check Swap Packages.** The system should be in "normal" operation with no swap packages failed over.

   Output should be: *All packages on primary*

   If all packages are not on primary or enabled, please check and correct the appropriate packages.

3. **Check Release ID.** The Release ID must be OB1 or greater.

4. **Check localization variables.** Verify that the site is localized correctly. Output should list your SITE_TYPE, FXA_LOCAL_SITE, FXA_INGEST_SITE, FXA_LOCAL_TZ, NODE (on WFO only), and the current satellite feed.

5. **Check for unsuccessful localizations.** If your site has performed an unsuccessful localization, a file called **.unSafe** was written to **/awips/fxa/data/localizationDataSets/LLL** on LX1, LX2, and DS1. If this file exists, it must be deleted before the install begins.

   Output should be: *no .unSafe file detected*

   If an .unSafe file exists, you must manually delete it.

6. **Check IFPS version (applies to WFO type systems only).** If your site is a WFO system, the script will display the latest version you have installed.

   An example of the output is below:

rap_name	*rap_version install_time*
IFPS11.4	*11.4 2002_10_04 15:36:21*
IFPS12.3	*12.3 2003_01_11 14:20:48*
IFPS13.2	*13.2 2003_04_15 16:45:52*

The last entry is the IFPS version most recently installed on your system, which in this example, is 13.2. **You must have at least IFPS13.2 in order to install the AWIPS OB2 Release.**

7. **Check partition sizes.** It is important that you verify that the system has an appropriate percentage of disk space available on each server and workstation before you perform the OB2 install. If disk space is not reduced to the recommended percentage, parts of the install could fail for lack of needed space. **For the OB2 release, most partitions should be no more than 85% used.** The output from this section, if any, will list partitions that will need to be reduced. There is also a separate file, **/home/ncfuser/AWIPScheckout<timestamp>.bdf**, that lists all partitions and space used. This file can also be used for further reference. The following list specifies the maximum used space:

   For DS1, DS2, AS1, AS2, and all workstations
   A. "/" (root) file system should be no more than **85%** used.
   B. "/awips/hydroapps" should be no more than **85%** used.
   C. "/awips/adapt" should be no more than **85%** used. (WFO only)
   D. "/awips/fxa" should be no more than **85%** used.

   For LS1
   A. "/var" should be no more than **85%** used.
   B. "/ldad" should be no more than **85%** used.

   If you need to reduce space, try to delete or move duplicate files, core files, and files from previous releases. You should also check for old backup subdirectories and files and remove them. You might also consider moving files such as locally acquired satellite and grids into the "/data/local" subdirectory.

   If "/awips/fxa" is above the allowable percentages **on the servers (ds1, ds2, as1, as2),** you can login as root to the appropriate server, and then run the commands in the following box to reduce space. (*This script will delete some localization files that are not needed on the servers. If you run the script, you might see some 'cannot stat' or similar type errors. You can ignore these.*)

```
export FXA_HOME=/awips/fxa
.  /awips/fxa/readenv.sh
/awips/fxa/bin/cleanup_localization.sh
bdf /awips/fxa
```

8. **Check localization files.** During the OB2 installation, a full localization

will be run on **lx1** and then the results will be pushed out to the other servers and workstations. As a consequence, you might get unsatisfactory results if you have different localization files on each system. You should review the **/home/ncfuser/AWIPScheckout<date>.localfiles** and make any necessary changes. In addition, localization scripts choose files from directories in a certain order of preference:

A. /data/fxa/customFiles/<filename>
B. /awips/fxa/data/localization/<site_id>/<site_id>-<filename>
C. National templates under various directories (e.g., /awips/fxa/data)

Therefore, you should also check to ensure that your intended active file is not overridden by an identically named file in a higher priority directory. You may wish to consult with your on-site localization expert for more information.

9. **Check informix status**. Verify that your Informix server is primary, online and replicating.

10. **Verify the model of the DS.** The model of the DS should be output in this section. You will use this information when you are loading each cd during the installation.

10. Mount the "Linux WFO-A, Linux NGIT" CD on the DS1:
Insert the Release OB2 CD into the CD-ROM drive on the DS1 and run the following commands:

A. `export TMOUT=0`

B. For K class server:

```
mount /dev/dsk/c3t2d0 /cdrom
```

For D class server:

```
mount /dev/dsk/c1t2d0 /cdrom
```

NOTE: If you can't remember which class server you have, type:

```
model
```

11. Do the following, as applicable:

You may wish to use the procedure in Attachment "b" entitled **"Optional Procedures to Obtain Data During the Upgrade VIA the WAN." Procedure 1** of that attachment

will allow a site to display text and graphics displays via the WAN from a backup site's workstation. You can run this procedure during the upgrade, if you wish. It won't prevent you from being in service backup, but will allow you to display products and create some messages during the upgrade. **Procedure 2** in Attachment "b" will allow a site via the WAN to run XNOW off a backup site's workstation and display results on one of the local sites workstations.

12. Ensure that there are no non-root users are logged into any workstations.

    Use the "**who -u**" command to check this.

Before going to Part 2, ensure you have returned to the ds1 and are the root user.

PART 2: Install OB2 Archiver Software

Automatically Saved and Restored Information:

/etc/rc.d/rc.local will be backed up

This applies to both RFCs and WFOs.

1. From **DS1 as root,** run the "installAX_OB2" script to install the Archiver software. (Sample output and error information are shown in the Script Log Output, page A2-1.)

   Note: Ensure you do not have a diskette in the AX drive before you proceed.
   Note: This will load the default configuration. Site modifications will need to be re-added.

   ```
   script -a /home/ncfuser/installAXOB2.out

   cd /cdrom

   ./installAX_OB2
   ```
   (This step can take from 5 to 10 minutes.)

   NOTE: This script will reboot the AX at a WFO.

2. After the script ends, type:

   ```
   ./stopscript
   ```

3. Review the script output file, "/home/ncfuser/installAXOB2.out," to ensure that no unexpected errors (such as "Text file busy", "fail", "error," etc.) were encountered during the installation.

If no errors occurred proceed to PART 3, otherwise contact the NCF.

PART 3: Install OB2 CP Software

Automatically Saved and Restored Information:

No files will be backed up.

1. From **DS1 as root,** run the "installCP_OB2" script to install the CP software. (Sample output and error information are shown in the Script Log Output, page A3-1.)

   ```
   script -a /home/ncfuser/installCPOB2.out

   cd /cdrom

   ./installCP_OB2
   ```
   (This step can take from 5 to 10 minutes.)

2. After the script ends, type:

   ```
   ./stopscript
   ```

3. Review the script output file, "/home/ncfuser/installCPOB2.out," to ensure that no unexpected errors (such as "Text file busy", "fail", "error," etc.) were encountered during the installation.

   If no errors occurred proceed to PART 4, otherwise contact the NCF.

PART 4: Install OB2 Software on Linux

Automatically Saved and Restored Information:
No files will be backed up.

Note: Step One is for OCONUS sites Only! All other sites should skip to Step 2.

1. *OCONUS sites.* From **DS1 as root** run the "OCONUS_Setup" script to setup some localization files. Prior to installing the Linux workstations. (Sample output and error information are shown in the Script Log Output, page A4-1.)

```
script –a /home/ncfuser/OCONUS_SetupOB2.out
cd  /cdrom
./OCONUS_Setup              (takes less than 1 minute)

./stopscript
```

2. All sites need to do the following on DS1 as root. (Sample output and error information are shown in the Script Log Output, page A4-4.)

```
script -a /home/ncfuser/fix_fstabLXOB2.out
cd /cdrom
./fix_fstabLX               (takes less than 1 minute)
```

Note: This will reboot the Linux workstation. The site will need to wait till both workstations have finished rebooting before proceeding.

```
./stopscript
```

3. a. From **DS1 as root,** use the following commands to move appropriate files into place and run the "installLXOB2" script to install the Linux software. (Sample output and error information are shown in the Script Log Output, page A4-5.)

```
script -a /home/ncfuser/installLXOB2.out
cd /data/local/nationalData
./moveob2files.sh
```

Note: stopscript is not run until step 4.

b. **<u>WFO sites that obtained Watch Warning Advisory (WWA) templates ahead of time need to do step 3b:</u>**

If your are a WFO that did Part 0, step 10 and Attachment "e" where you downloaded the

WWA templates, and placed your customizations into them, you should do the following commands. You need to first go to the data/fxa/customFiles directory and move out the old WWA templates [see 1) below]. After this, you need to copy the WWA templates you downloaded and customized into the data/fxa/customFiles directory [see 2) below]. If you did step 10 and attachment "e" your downloaded and customized templates should be in the /data/local/ob2WWA directory.

1) Remove the old templates and place a copy into the **ob1WWA_bu** directory (CCC is the localization site ID):

NOTE: Type carefully

```
cd /data/fxa/customFiles
mv WWA*.preWWA  /data/local/ob1WWA_bu
mv nwr*.preWWA  /data/local/ob1WWA_bu
mv CCC-WWA*.preWWA  /data/local/ob1WWA_bu
mv CCC-nwr*.preWWA  /data/local/ob1WWA_bu
```

2) Copy the templates downloaded and customized into data/fxa/customFiles:

```
cd /data/local/ob2WWA
cp *  /data/fxa/customFiles
```

c. All sites must do the following:

```
cd /cdrom
./InstallLXOB2.sh
```
(This takes about 1 hour to complete.)

NOTE: While the script is running it will first do LX1 (and show the messages below) then do LX2. During the script, the system is brought down to run level 2. The appropriate LX screen will be in a text mode, and will show the following:

Starting PCMCIA	***[OK]***	(Sometimes the LX will stay here for 30 minutes; you won't see next message)
Starting crond	***[OK]***	(Other LXs will show the above message briefly then show this message and remain for 30 minutes)

4. After the script ends, type:

```
./stopscript
```

5. Review the script output file, "/home/ncfuser/installLXOB2.out," to ensure that no unexpected errors (such as "Text file busy", "fail", "error," etc.) were encountered during the installation.

6. If the script indicates that you must **reboot** LX1 and/or LX2 **ignore the message**. You do not need to reboot either LX1 or LX2.

7. Un-mount the "Linux WFO-A, Linux NGIT" CD using the "umount" command:

   A. Ensure in all open windows, that the current directory is not "cdrom."

   B. Type the following:

```
cd /
umount /cdrom
```

   Remove the current "Linux WFO-A, Linux NGIT" CD from the CD-ROM drive on the DS1.

8. Continuing as root on DS1, insert the "LDAD, MSAS, LAPS, OH, FREEWARE" CD into the CD-ROM drive on the DS1 and run the appropriate "mount" command to mount the disk:

   For K class server:

```
mount /dev/dsk/c3t2d0 /cdrom
```

   For D class server:

```
mount /dev/dsk/c1t2d0 /cdrom
```

   If no errors occurred proceed to PART 5, otherwise contact the NCF.

PART 5: Install OB2 LDAD Software

Automatically Saved and Restored Information:

The files mentioned in Attachment "a" part A, will be replaced in OB2. The ROB1 versions of those files will be saved off to /px2data/BACKUPLDADOB1 by the installLDADOB2 script.

Note: Non-operational sites that do not have an LDAD can skip Part 5 and proceed to Part 6.

Note: Attachment "a" contains a list of LDAD files that will be installed and activated during the OB2 upgrade.

1. Do the following:

   A. You need to prevent ASOS dialing into LDAD during OB2. To do this, turn off your dial in phone lines on your LDAD.

   B. If you have any interfaces to LDAD, stop these, as well.

2. Login to the LS1 as **root** and verify that there are no LDAD applications running in the "/usr/local" partition. To do this, do the following:

   ```
   rlogin ls1
   ```

   A. Stop all local software running including ldm and samba, if it runs at your site. Use normal shutdown procedures.

      1. A typical way that many sites stop samba is to use the vi editor and edit the /etc/inetd.conf file and comment out the 3 lines that contain: smbd, nmbd, and swat. To do this, place a # at the beginning of these 3 lines. After doing this, run the following command:

         ```
         inetd -c
         ```

      2. To stop ldm, the following are examples of what various sites use:

         ```
         su - ldad
         ldmadmin stop
         exit
         ```

         Central Region uses:

```
su - ldm
cd /usr/local/ldm/runtime/bin
ldmadmin.in stop
exit
```

B. Disable any locally added crons which start these applications (e.g., root LDAD).

After all processes are killed, enter the **exit** command to log out of ls1 and **return to DS1**.

3. From **DS1** as **root,** run the "installLDADOB2" script to install the LDAD software: (Sample output and error information are shown in the Script Log Output, page A5-1.)

```
script -a /home/ncfuser/installLDADOB2.out
cd /cdrom
./installLDADOB2
```
(This will take from 5 to 10 minutes.)

Please see note below as the script runs.

NOTE: If the screen can not scroll, resize the window.

4. After the script ends, type the following:

```
./stopscript
```

5. Review the script output file, "/home/ncfuser/installLDADOB2.out," to ensure that no unexpected errors (such as "Text file busy", "fail", "error," etc.) were encountered.

If no errors occurred proceed to PART 6, otherwise contact the NCF.

PART 6: OB2 MSAS Script

Automatically Saved and Restored Files:

MSAS files listed in Attachment "a," part B will be updated. The replaced files will be saved to /data/fxa/BACKUPMSASOB1.

1. From **DS1 as root**, run the "installMSASOB2" script
   (Sample output and error information are shown in the Script Log Output, page A6-1.)

   ```
   script -a /home/ncfuser/installMSASOB2.out

   cd /cdrom

   ./installMSASOB2
   ```
   (Takes about 3 minutes to run)

2. After the script ends, type:

   ```
   ./stopscript
   ```

3. Review the script output file, "/home/ncfuser/installMSASOB2.out," to ensure that no unexpected errors (such as "Text file busy", "fail", "error," etc.) were encountered during the installation. If you see "***Not Dumped***" messages, ignore them.

If no errors occurred proceed to PART 7, otherwise contact the NCF.

PART 7: OB2 Pre-Install Script

Automatically Saved and Restored Information
No files will be backed up.

1. From **DS1 as root**, run the "preinstallOB2" script:
(Sample output and error information are shown in the Script Log Output, page A7-1.)

   Note that data ingest stops when the preinstallOB2 script begins.

   ```
   script –a /home/ncfuser/preinstallOB2.out

   cd /cdrom

   ./preinstall_OB2
   ```
   (This takes 30 to 60 minutes.)

   See notes below.

   NOTE 1: To monitor the progress of this script, open another terminal window on DS1 and use the "tail" command:

   ```
   tail -f /home/ncfuser/preinstallOB2.out
   ```

   NOTE 2: This step can take from 30 to 60 minutes at some sites, and up to 2 hours at others. The script will shut down all processes, clean up some old files, and install new freeware.

   NOTE 3: If you see the following message you can **ignore** it:

   /sbin/init.d/hdpdecode[87]: 29842 Bus error (coredump)

   NOTE 4: **Below are messages you cannot ignore**. If you see them, call the NCF.

   For a "**rcp command**" with files being copied to the "/**usr/local/**" subdirectory, if you see the message "***no such file or directory***" or "***no space left on device***" you **cannot ignore it.** See the log output file page A7-1 for more information on what to do.

2. After the script ends, do the following:

   A. Type:
   ```
   ./stopscript
   ```

B. Review the script output file, "/home/ncfuser/preinstallOB2.out," to ensure that no unexpected errors (such as: "Text file busy", "fail", "error", "Device busy", and "no such file or directory," etc.) were encountered during the installation.

3. The script updates a menu on the xyplex. You will need to reboot the xyplex in order to see these new additions. One way to do this is to type the following from the xyplex prompt:

```
xyplex > set priv system
xyplex >> init delay 0
```

4. Next, **all sites** need to ensure that no stray processes are running on DS1, DS2, AS1, AS2, and the Workstations:

A. On DS1 as **root**, run the "check_process" script that was automatically created in Part 0. Type the following:

```
cd /home/ncfuser
./check_process > check_process.out
```

Note: This will take approximately 45 seconds to complete.

B. **View the "/home/ncfuser/check_process.out" file** to ensure that there are no stray processes running (which were not killed by the "preinstallOB2" script run in step 1). If a stray process is detected, use "**`kill <pid>`**" or, if necessary, **"`kill -9 <pid>`"** to kill it (where <pid> is the process ID). See (3) and (4), below, for some acceptable processes.

(1) If, however, you see the following "oper" process running:

/awips/hydroapps/whfs/standard/bin/process_dpafiles

then you should kill it by typing:

```
/sbin/init.d/hdpdecode stop
```

(2) If, you see the following "x400mta" process running (where <site> is your site ID in lower case):

x400mta -d/usr/x400mail <site>

then you should kill it by typing:

```
/awips/ops/bin/x400mta_stop
```

(3) On the workstation you are performing the OB2 upgrade, **the following acceptable processes** may be running and **you don't need to kill them**:

xclock -padding 8 -name localclock -fg black -bg lightgray
/usr/dt/bin/ttsession -s
dtwm
/usr/dt/bin/dtsession
xterm -title Dear_Old_state -n Dear_Old_State -fg green -b
telnetd -b /etc/issue

(4) For this upgrade, all fxa processes will still be running on PX1 and PX2. This is acceptable.

C. During one of the beta upgrades for OB2, it appeared that "ncfuser" was running msg_send. As a consequence, while checking for stray processes, we suggest that you check "ncfuser", as well.

5. If necessary, rerun the check_process script in step 4 until you can verify that all applicable processes have been stopped.

6. If you haven't already done so in step 2A, run the stopscript command before you continue.

If no errors occurred proceed to PART 8, otherwise contact the NCF.

PART 8: Install OB2 LAPS Software

Automatically Saved and Restored Information:
No files will be backed up.

NOTE: <u>PBP, HFO, GUM, SJU and all RFCsites can skip all of Part 8 (steps 1 through 3).</u>

1. From **DS1 as root,** run the "installLAPS_OB2" script to install the LAPS software. (Sample output and error information are shown in the Script Log Output, page A8-1.)

   ```
   script -a /home/ncfuser/installLAPSOB2.out

   cd /cdrom

   ./installLAPS_OB2
   ```
   (This step can take from 5 to15 minutes.)

   Note: Once the script starts, it will sit at "***Installing LAPS for OB2...***" for about 10 minutes.

2. After the script ends, type:

   ```
   ./stopscript
   ```

3. Review the script output file, "/home/ncfuser/installLAPSOB2.out," to ensure that no unexpected errors (such as "Text file busy", "fail", "error") were encountered during the installation.

If no errors occurred proceed to PART 9, otherwise contact the NCF.

PART 9: Install OB2 Hydrology Software

Automatically Saved and Restored information:

For RFC sites only, there will be several installation options where the RFC can choose whether to keep their existing pre-OB2 software or to install the OB2 software. If the RFC chooses to keep their existing pre-OB2 software, it will be saved off temporarily and then restored automatically by the OB2 installation process.

1. From DS1 as **root**, run the "installOH_OB2" script to install OH software. (Sample output/ error information are shown in the Script Log Output for **WFO** see page A9 -1 to A9-5; **RFC** see A9-6 to A9-12.)

```
script -a /home/ncfuser/installOHOB2.out

cd /cdrom

./installOH_OB2
```

NOTE 1: This step will take from 10-15 minutes for a WFO site, and from 25 minutes to an hour for a RFC site.

2. **This step applies to RFC systems only.**

   A If you see the following error message, you can ignore it:

   tar: cannot stat <file type>

   B. The following questions will be asked several times. You will need to respond **y** or **n** for each one.

   Did the above command complete without error (i.e., no space left) (y/n)?

   C. There will be several installation questions with options (listed below) in which the RFC must choose whether to keep their existing OHD software or install the OB2 OHD package. For the following questions, the term "saved off version" pertains to your site files which were saved off earlier by this script.

IMPORTANT

If you answer, "y", below this means the RFC wants to have **their Pre-OB2 version put back** onto their system and "**n**" means the RFC wants to **keep the newly installed OB2 software which is R23.0.**

Do you want to replace Linux nwsrfs with saved off version (y/n)
Do you want to replace Linux ffg with saved off version (y/n)
Do you want to replace Linux verify with saved off version (y/n)
Do you want to replace Linux xdat, xnav, and xsets with saved off version (y/n)

NOTE: All RFC type systems will see the following HP questions:

Do you want to replace HP grib with saved off version (y/n)
Do you want to replace HP nwsrfs with saved off version (y/n)
Do you want to replace HP ffg with saved off version (y/n)
Do you want to replace HP send_rfc with saved off version (y/n)
Do you want to replace HP verify with saved off version (y/n)
Do you want to replace HP xdat, xnav, and xsets with saved off version(y/n)

3. After the script ends, do the following:

   A. Type the stop script command**.**

      ```
      ./stopscript
      ```

   B. Review the script output file, "/home/ncfuser/installOHOB2.out", to ensure that no unexpected errors (such as "Text file busy", "fail", "error") were encountered during the installation.

4. Un-mount the "LDAD, MSAS, LAPS, OH, FREEWARE" CD using the "umount" command:

   A. Ensure in all open windows, that the current directory is not "cdrom."

   B. Type the following:

      ```
      cd /
      umount /cdrom
      ```

   Remove the current "LDAD, MSAS, LAPS, OH, FREEWARE" CD from the CD-ROM drive on DS1.

5. Continuing as root on DS1, insert the “ADAPT, NMAP, WFOA, NGIT UX” CD into the CD-ROM drive on the DS1 and run the appropriate “mount” command to mount the disc:

   For K class server:

   ```
   mount /dev/dsk/c3t2d0 /cdrom
   ```

   For D class server:

   ```
   mount /dev/dsk/c1t2d0 /cdrom
   ```

If no errors occurred, proceed to PART 10, otherwise contact the NCF.

PART 10: Install OB2 ADAPT Software

Automatically Saved and Restored information:

No files will be backed up.

Note: **RFCs can skip all of Part 10 (steps 1 through 3).**

1. From **DS1 as root,** run the "installADAPT_OB2" script to install the ADAPT software. (Sample output and error information are shown in the Script Log Output, page A10-1.)

   ```
   script -a /home/ncfuser/installADAPTOB2.out

   cd /cdrom

   ./installADAPT_OB2
   ```
   (This step can take from 5 to 20 minutes.)

   NOTE 1: The installation script will check the site type and automatically skip this ADAPT installation for the RFC sites. The RFC sites should then go directly to Part 6.

   NOTE 2: If you see the following error message, it's a problem and you should call the NCF:

   Error in line 1 **Note: This is an error that cannot be ignored.**

2. After the script ends, type:

   ```
   ./stopscript
   ```

3. Review the script output file, "/home/ncfuser/installADAPTOB2out," to ensure that no unexpected errors (such as "Text file busy", "fail", "error") were encountered during the installation.

If no errors occurred, proceed to PART 11, otherwise contact the NCF.

PART 11: Install OB2 NMAP Software

Automatically Saved and Restored information:

The oldest version of NMAP (located in $NMAP_DIR/old) will be removed. The current version will be moved to $NMAP_DIR/old. The OB2 version will be installed in $NMAP_DIR/current.

NOTE: Only the following sites should install NMAP.
ACR, AFC, AFG, AJK, ALR, BCQ, EHU, FWR, GUM, HFO, KRF, MFL, MSR, NHCR, NHCW, NHDA, NHOR, NHOW, ORN, PBP, RHA, SJU, SPCW, TAR, TIR, TUA, VHW, VRH, VUY, WNAW, WNOR, WNOW, WNAR.

All other sites should skip to part 12.

1. **All sites, except those listed in the box above, should skip to part 12.**

   From DS1 as **root**, run the "installNMAP_OB2" script to install NMAP software (Sample output and error information are shown in the Script Log Output, page A11-1.)

   ```
   script -a /home/ncfuser/installNMAPOB2.out
   cd /cdrom
   ./installNMAP_OB2
   ```
   (Takes 10-20 minutes)

   Installing NMAP version 5.6.k... (This will sit here for about 10 minutes)

2. After the script ends, do the following:

   A. Type the stop script command**.**

   ```
   ./stopscript
   ```

   B. Review the script output file, "/home/ncfuser/installNMAPOB2.out", to ensure that no unexpected errors (such as "Text file busy", "fail", "error") were encountered during the installation.

If no errors occurred proceed to Part 12, otherwise contact the NCF.

PART 12: Install OB2 FXA/System Software

Automatically Saved and Restored Information:
No files will be backed up.

1. Run the “install_OB2" script to install the FXA/System software: (Sample output and error information are shown in the Script Log Output, page A12-1.)

   A. Type the following:

   ```
   script -a /home/ncfuser/installOB2.out

   cd /cdrom

   ./install_OB2
   ```

   After you start the install_OB2 script, see the notes below. **Do not attempt to start D2D until after Part 13, step 1, is complete.**

   NOTE 1: If the screen can not scroll during the install, resize the window and this will fix the problem.

   NOTE 2: You may see some prompts for input from the user, ignore these messages. **The script will provide all needed input. <u>This script will take around 2 hours to run for 5 workstations.</u>**

   NOTE 3: Sites do not need to restart data ingest or the SIMPACTS.

   B. While the script runs, examine the script either by examining the screen output or using the tail command. Do this to ensure no unexpected errors occur/occurred.

2. After the "install_OB2" script ends, do the following:

   A. Type:
   ```
   ./stopscript
   ```

   B. Review the script output file, “/home/ncfuser/installOB2.out,” to ensure that no unexpected errors (such as “Text file busy”, “fail”, “error”) were encountered during the installation.

3. You can restart the application programs and site created applications stopped earlier and also enable crons which start the applications (e.g., root LDAD).

A. **`rlogin ls1`**

1. Restart all local software running including ldm and samba, if it runs at your site. Use normal startup procedures.

   a. A typical way that many sites restart samba is to use the vi editor and edit the /etc/inetd.conf file and remove the comments from the 3 lines that contain: smbd, nmbd, and swat. To do this, remove the # at the beginning of these 3 lines. After doing this, run the following command:

      `inetd -c`

   b. To start ldm:

      `su - ldad`
      `ldmadmin start`
      `e x i t`

      Central Region uses:

      `su - ldm`
      `cd /usr/local/ldm/runtime/bin`
      `ldmadmin.in start`
      `exit`

2. You can also restart any locally added crons which start these applications (e.g., root LDAD).

B. After all processes are started, enter the **exit** command to log out of the ls1 and **return to DS1**.

4. If you didn't already do it in step 2, run the **stopscript** command.

If no errors occurred, proceed to PART 13 otherwise contact the NCF.

PART 13: OB2 Post Install Script

Automatically Saved and Restored information:
Nothing will be saved off.

1. From DS1 as **root**, run the post install script:
(Sample output and error information are shown in the Script Log Output, page A13-1.)

```
script  -a /home/ncfuser/postinstallOB2.out
cd /cdrom
./postinstall_OB2          See notes below
```

NOTE 1: You may see some prompts for input from the user, ignore these messages. **The script will provide all needed input.**

NOTE 2: This step will take about **10 minutes**, depending on the number of workstations. The script will initialize the software inventory.

NOTE 3: **For RFC systems**, the DPA decoder may be managed differently from site to site. The RFC site should verify that their **"site-specific"** DPA decoder setup is running. If the DPA decoder is not running, please manually re-start it.

NOTE 4: If you see the following, you can ignore it:

The ITO Message Interceptor doesn't run.

NOTE 5: If you see the following, you can ignore it:

error: package megamon -2.5.0 is not installed

Important Note: Do not proceed to step 2 or beyond, until the script above has completed!

2. Once the script ends, the system is operational. You can start D2Ds at this time.

Sites should start the Netscape System Monitoring Window to examine the following processes and ensure the system is fully operational:

Data server ingest processes,
Application server ingest processes,
LDAD processes, and

AWIPS data status

NOTE: The Netscape Window may take 10 minutes or more to get updated. If after a reasonable time you see a problem, call the NCF. Note also that HDW BufrDriver does not run till the PX's are installed in Part 14.

3. Once the script ends, do the following:

   a. Type:

      `./stopscript`

   b. Review the script output file, "/home/ncfuser/postinstallOB2.out", to ensure that no unexpected errors (such as "Text file busy", "fail", "error") were encountered.

   c. If in Part 1, you turned off the dial in phone lines to ASOS, reconnect them. Similarly, as needed, ensure LDAD interfaces, if touched in Part 1, are reconnected.

   d. If you provide a **CWSU** LINUX box connection to your AWIPS and unplugged the wire from Port 16 on the waveswitch as directed in part 1, step 5, **don't forget to reconnect it**.

4. Merge site changes into crontabs:

   If you find that some crontabs were replaced, don't just substitute the old ones back in! Instead, merge site specific changes into the new ones. Some baseline crontabs were replaced in OB2 to improve performance. If you don't merge your site specific changes into the new crontabs, the improvement introduced in OB2 will be lost! In addition, ensure that any changes you make to crontabs are done appropriately or you will have problems with failovers and server reboots.

   Check to see if you need to recover volume browser customized changes.

5. Non-operational WFOs (i.e., Regional Sites, National Centers, etc):
   The FXA cron is set to have HWR and Climate products sent out over the WAN. You will want to modify the crontab and edit out these processes. To accomplish this do the following:

   On DS1 as user FXA:

   a. Type:
      `crontab -e` to edit the fxa cron.

Search for the HWR and climate sections and comment out the commands.

b. The edited cron needs to be copied to the cmcluster directory.

On DS1 as user **root**:

```
cd /etc/cmcluster/crons/fxa
cp -p ds1.dsswap ds1.dsswap.baseline
cp -p ds2.dsswap ds2.dsswap.baseline
cp /var/spool/cron/crontabs/fxa ds1.dsswap
cp /var/spool/cron/crontabs/fxa ds2.dsswap
chown root:sys ds*.dsswap
chmod 555 ds*.dsswap
rcp -p ds*.dsswap ds2:/etc/cmcluster/crons/fxa
remsh ds2 "chown root:sys
/etc/cmcluster/crons/fxa/ds*.dsswap"
remsh ds2 "chmod 555
/etc/cmcluster/crons/fxa/ds*.dsswap"
```

6. Various local rps lists in the data/fxa/radar/lists subdirectory were recreated during radar localization. As a consequence, if the site saved off the old local rps lists from this subdirectory in Part 0, bring them back, now.

A new radarDataMenus.template was delivered in OB2. If you customized your old template, add your customized changes into the new one and place it in the appropriate customization subdirectory.

7. If it is getting late in the day and you are close to being outside the window when NGIT support for the upgrade ends (7AM to 7PM ET), you probably should call the NGIT point of contact and get their opinion on what you should do.

8. **RFCs and RFC type systems**, (must do on day of upgrade)

The OHD software uses application default tokens for control of certain options and paths needed in applications. The national, baselined set of token definitions is given in the file /awips/hydroapps/.Apps_defaults. Local offices should NOT modify this file; it is overwritten each AWIPS release with the baseline settings so changes will be lost. Local settings to tokens are defined in local file /awips/hydroapps/.Apps_defaults_site.

The national token file is configured for the typical WFO settings. Therefore, RFCs should adjust tokens in the local token file. There are some new tokens for Release OB2 that RFCs should set to match their operations. Each of the tokens is discussed below, with the value from the national file and the recommended RFC file given. For each token, a single-line entry should be added to site file (/awips/hydroapps/.Apps_defaults_site) using a text editor. The format of each definition in the file is:

tokenname : tokenvalue

The exact location of the entry is not mandatory, but the tokens should be grouped in some logical manner, with tokens for similar purposes listed after each other.

Token name:	National token value (.Apps_defaults)	Local token value (.Apps_defaults_site)
damcat_hostoffice_type :	wfo	rfc
damcat_office_datasource :	ohd	rfc
hv_pointdata_display :	ON	OFF
db_purge_backup_retention_use :	ON	OFF

The descriptions of each of these tokens is given in the WHFS Release Notes for OB2.

9. **For RFC systems only**:

A. As user **oper**, start the RFC specific oper cron. Also, ensure your shefdecoder is running.

B. Additional items for RFC sites to check out:

1. If not running, start the DPA radar product decoding process according to standard RFC procedures (varies among the RFCs).

2. If not running, install the "oper" user crontab according to standard RFC procedures (varies among the RFCs).

3. Make sure that each user environment gets created as in earlier releases so that:
   a. The APPS_DEFAULTS, APPS_DEFAULTS_USER, and APPS_DEFAULTS_SITE environment variables are set. APPS_DEFAULTS must be /awips/hydroapps/.Apps_defaults.

   b. The following directories are in the users PATH
   /awips/hydroapps/rfc/nwsrfs/ofs/scripts
   /awips/hydroapps/public/bin

   c. The “fun” function is set up upon login. This can be done by running:

. /awips/hydroapps/public/bin/fun when the user logs in or creates a new window.

4. Check the HPs to ensure that a file exists so IFP can run on the Xterminals

   a. Check that either:

      /opt/hpxt/enware/xthome/fonts/hp_roman8/75dpi/fonts.alias
      or
      /opt/hpxt/enware2/xthome/fonts/hp_roman8/75dpi/fonts.alias

      exists on AS1 and AS2.

      If it does, go on to step 5. If not, continue with steps b and c below.

      Note: Either the ../enware or ../enware2 directory will exist on AS1 and AS2 machines (depends on the version of the Xterminals). Use the appropriate directory names in steps b and c.

   b. Copy /awips/hydroapps/fonts/hp_roman8/75dpi/as.fonts.alias to the /opt/hpxt/enware/xthome/fonts/hp_roman8/75dpi or /opt/hpxt/enware2/xthome/fonts/hp_roman8/75dpi directory on AS1 and AS2.

   c. Rename the file to fonts.alias in the /opt/hpxt/enware/xthome/fonts/hp_roman8/75dpi or /opt/hpxt/enware2/xthome/fonts/hp_roman8/75dpi) directory.

5. Check the symbolic links from /usr/lib/X11/app_defaults to the RFC application resource files on each workstation. There should be a link and a real file according to the following list. Recreate, if necessary, on all workstations.

   a. As needed, recreate symbolic links for all files (there should be 1) in the /usr/lib/X11/app_defaults directory to the /awips/hydroapps/rfc/nwsrfs/ens/app_defaults directory.

      There should be a link and a real file according to the following:

      /usr/lib/X11/app_defaults/espadp _>
      /awips/hydroapps/rfc/nwsrfs/ens/app_defaults/espadp

b. As needed, recreate symbolic links for all files (there should be 1) in the /usr/lib/X11/app_defaults directory to the /awips/hydroapps/rfc/nwsrfs/icp/app_defaults directory.

There should be a link and a real file according to the following:

/usr/lib/X11/app_defaults/ICP _>
/awips/hydroapps/rfc/nwsrfs/icp/app_defaults/ICP

c. As needed, recreate symbolic links for all files (there should be 6) in the /usr/lib/X11/app_defaults directory to the /awips/hydroapps/rfc/nwsrfs/ifp/app_defaults directory.

There should be a link and a real file according to the following:

/usr/lib/X11/app_defaults/Delete_atoms _>
/awips/hydroapps/rfc/nwsrfs/ifp/app_defaults/Delete_atoms

/usr/lib/X11/app_defaults/Forecast_Program _>
/awips/hydroapps/rfc/nwsrfs/ifp/app_defaults/Forecast_Program

/usr/lib/X11/app_defaults/IFP_map _>
/awips/hydroapps/rfc/nwsrfs/ifp/app_defaults/IFP_map

/usr/lib/X11/app_defaults/NWSRFS_cant_run _>
/awips/hydroapps/rfc/nwsrfs/ifp/app_defaults/NWSRFS_cant_run

/usr/lib/X11/app_defaults/Set_dates _>
/awips/hydroapps/rfc/nwsrfs/ifp/app_defaults/Set_dates

/usr/lib/X11/app_defaults/Working_Dialog _>
/awips/hydroapps/rfc/nwsrfs/ifp/app_defaults/Working_Dialog

d. Recreate symbolic links for all files (there should be 2) in the /usr/lib/X11/app_defaults directory to the /awips/hydroapps/precip_proc/bin directory.

There should be a link and a real file according to the following. For RFC's still using stage 3:

/usr/lib/X11/app_defaults/S3Post_res _>
/awips/hydroapps/precip_proc/bin/S3Post_res

/usr/lib/X11/app_defaults/Stage3_res _>
/awips/hydroapps/precip_proc/bin/Stage3_res

e. Example of creating a symbolic link

ln -s /awips/hydroapps/rfc/nwsrfs/ifp/app_defaults/IFP_map /usr/lib/X11/app_defaults

6. RFCs need to check permissions as follows.

a. On DS1, check the permissions for the directories under **/awips/hydroapps/rfc/verify/output**. These should be 775.

If the permissions are not correct, you will need to fix them. Since subdirectories under "output" varies from site to site, you will need to list the subdirectories first. Next, substitute the appropriate directory name (<directory name>) and do the following:

```
cd /awips/hydroapps/rfc/verify/output
chmod 775 <directory name>
```

b. On DS1, check the permissions for the directories under **/awips/hydroapps/rfc/verify/input/verify**. These should be 775.

If the permissions are not correct, you will need to fix them. Since subdirectories under "verify" varies from site to site, you will need to list the subdirectories first. Next, substitute the appropriate directory name (<directory name>) and do the following:

```
cd /awips/hydroapps/rfc/verify/input/verify
chmod 775 <directory name>
```

10. Un-mount the "ADAPT, NMAP, WFOA, NGIT UX" CD using following command:

A. Ensure in all open windows, that the current directory is not "cdrom"

B. Type the following as **root on DS1**:

```
cd /
umount /cdrom
```

Remove the current "ADAPT, NMAP, WFOA, NGIT UX" CD from the CD-ROM drive on DS1.

If no errors occurred, you may proceed to Part 14, Otherwise contact the NCF.

PART 14: Install PX Software

Automatically Saved and Restored information:
Nothing will be saved off.

1. On **DS1** as root, run the install px software script. (Sample output and error information are shown in the Script Log Output, page A14-1.)

```
script –a /home/ncfuser/InstallPXOB2.out
cd /home/awipsadm/install
./InstallPX.sh installob2    (This takes about 30 minutes to run)
exit
```

   NOTE 1: The system may sit at the following message for about 10 minutes at some sites:

   Relocating px1apps. Service px1apps relocated.

   NOTE 2: If you are asked the following, always answer **yes**:

   ERROR CONDITION EXISTS!! DO YOU WANT TO OVER-RIDE?(yes/no)

   NOTE 3: If you see the following error, call the NCF/NGIT point of contact. This error cannot be ignored.

   Unable to relocate PX1apps

2. Verify that there were no errors by reviewing the output file in /home/ncfuser.

If no errors occurred, proceed to PART 15. Otherwise, contact the NCF.

PART 15: OB2 After-Install Procedures

The following procedures **MUST** all be completed as part of the OB2 upgrade. Procedures 1-6 must be run on the day of the install, if applicable. Procedure 7 must to be done before you go into backup mode.

1. LDAD Post Install Procedure
2. OH Post Install Procedure
3. Omniback Instructions
4. Maintenance Release(s) for OB2
5. Miscellaneous Post install procedures
6. Hourly Weather Roundup (HWR) Procedure
7. Rerun Localization for your backup sites
8. Operational WFOs that use WarnGen need to customize their templates, train the staff, and activate the new templates
9. Secure a Good Level 0 Archive as a Backup
10. Secure a Good LDAD Backup
11. Checking DS Server Failover Configuration

Procedures 8 - 11 need to be done...but not on the day of the upgrade. They can be done within a week or so after the rest of the install.

1. LDAD Post Install Procedures (must be done on day of upgrade):

All sites must do A and B. Some sites will also need to do C.

A. On **DS1** as user **ldad**, run the following:
Moves pre-OB2 created sessions into the new OB2 designed locations.

/awips/fxa/ldad/bin/createSessList.ksh

B. On **DS1** as user **fxa** run the following:

proc ldadServer
kill <pid> where pid is the number returned above
/awips/fxa/bin/ldadServer &

C. If the baseline OB2 files listed in Attachment "a" section A are acceptable, because you did not make customized changes to any of them, you can skip the rest of this section.

After installing OB2, as needed, merge site-specific changes from your ROB1 version of these or other files listed in Attachment "a" section A into the new ROB2 files. Follow steps 1-5, below, to perform the changes and activate the modifications.

1. Login to DS1 as user **ldad**.
   (Note that for ls1 files, you will need to login to ls1 as the ldad user).
   (Note that for AS1 files, you need to login to AS1 as the ldad user).

2. As needed, merge your customized changes from the ROB1 file into the OB2 file. The "diff" command may help you find the changes. Use the vi editor to merge in these changes:

   ```
   vi /awips/fxa/ldad/data/example.pl
   ```

3. Copy the updated OB2 file to DS2 to ensure that you don't have problems during fail-overs. (Note: for ls1 files, don't copy to ds2.) (Note: Locally edited files on DS1 [AS1], should be copied to DS2 [AS2]).

4 Repeat the steps above, for other activated files which need customized changes merged into them.

5. Once modifications have been made, do the following to restart LDAD:

   ```
   cd /awips/fxa/ldad/bin
   stopLDAD.sh
   startLDAD.csh
   ```

2. OH Post install Procedures (2a must be done on day of upgrade):

a. WFO and RFC type systems

A new locally customizable file has been added for use by the RiverPro application. This file is specific to a given office configuration for RiverPro. Because these files have the office name in their filename, the provided file should be copied for each office. To do this, issue the following commands as user oper:

```
cd /awips/hydroapps/whfs/local/data/app/riverpro
cp fcst_trend_phrase.XXX fcst_trend_phrase.SSS
```

where SSS is the identifier for each office configured for RiverPro use. This should include the host office and any offices for which the host office provides service backup. Repeat this copy command for each of the configured offices. The offices for which RiverPro is configured can easily be determined by issuing

the command:

```
ll header.tpl.*
```

and noting the suffix appended to each of the listed files.

b. **WFO and RFC type systems**

New/repeated DamCat info (this does not have to be done on the same day as the rest of the upgrade.)

1. Obtain the Damcat local data sets. Please check http://www.nws.noaa.gov/oh/hod_whfs and look at Damcat Data Upgrade for specific information. (Recall that the default Damcat data was delivered on R5.2.2 CDs are for Utah, only.)

2. For OB2, the DamCat application and its database schema have been updated. As part of the OB2 install, the database provided in R522 is converted to match the OB2 application. The database will still be for the Utah service area. After the install, offices are instructed to visit the website http://www.nws.noaa.gov/oh/hod_whfs and look at Damcat Data Upgrade for specific information.

3. Omniback Instructions (must be done on day of upgrade)

Insert a blank DAT tape into Slot #2 of the spare magazine. When you are ready to initialize the new tapes contact your NGIT POC for the OB2 Install.

4. Maintenance Releases for OB2 (must be done on day of upgrade)

This is a reminder that any maintenance releases to OB2 should be installed on the day of the upgrade, as appropriate.

The web page with AWIPS software and Maintenance Release information is found at: http://www.ops1.nws.noaa.gov/awips_softwre.htm

5. Miscellaneous Post install procedures (must do on day of upgrade)

A. We need to reduce the number of NOAFOSPIL products from 30 to 2 in order to save database space. This step will take between 15 - 30 minutes to complete depending on the number of products in your fxatext database. To do this do the following as user **root** on ds1:

```
su - fxa
textdb -v NOAFOSPIL 2
```

B. OB2 Watch Warning Advisory (WWA) Updates **(Operational WFOs)**

1. **If you did part 0, step 10 and attachment "e"**, before the upgrade, then you obtained the OB2 WWA templates and customized them. In part 4 step 3b, you copied these into the data/fxa/customFiles directory. The OB2 upgrade localization should have activated your new WWA templates.

   At this time, you should run WWA and check all your WWA templates to ensure they contain all the customizations you want.

2. **On the other hand, if you did not do part 0 step 10**, you will need to customize the OB2 templates and place the results into data/fxa/customFiles at this time and rerun a WWA localization. After this, you should also run WWA and check your new templates.

C. OB2 WarnGen Updates **(Operational WFOs)**

1. **If you did part 0 step11 and attachment "f"**, you should now be running OB2 software with the OB1 templates being active. This is the case even though the new OB2 WarnGen templates will reside in the data/fxa/nationalData directory.

   At this time, you should run WarnGen and check all your WarnGen templates to ensure they contain all the customizations you want. Remember, at this point, you should have your OB1 templates active.

2. **If you did not do part 0, step 11 and attachment "f"**, then at this point all your customized OB1 templates in /data/fxa/customFiles and localization/LLL are still active. However, if you need to use a template that is not customized, then a new OB2 template will be used to create your message. Before December 2003, the main difference between having an "active" OB2 and OB1 template, is that the "followup messaging" will be different for each. The OB1 template will act similarly to the way it did in OB1, but the new "followup messaging" will be active for the OB2 template. Information on the "followup messaging" capability and what it means operationally is found at:

   http://www-sdd.fsl.noaa.gov/~ramer/noaa/ob2-wgn/followUp.html

   A site may want to live with having a mixture of both OB1 and OB2 templates or do the following:

a. Get a copy of the appropriate baseline template that was active during OB1 and place it into /data/fxa/customFiles and run a localization. or

b. Customize the OB2 templates and activate them.

D. **Operational WFOs: AX and WES Issue**
One of the OB2 beta sites indicated that they lost connectivity between the AX and WES after the OB2 upgrade. Check this at this time. The fix used by the beta site was to add the WES information back into the AX hosts.allow and hosts.equiv file, then do the nfs stop & start as per the original WES instructions.

6. Hourly Weather Roundup (HWR) Procedure (must do on day of upgrade for sites that use HWR)

1. Launch the OB2 HWR main GUI (via the AWIPS menu on the Linux WS, or the System Control Menu on the HP WS).

2. Select the "**PILs**" option on the menu. Dismiss the error dialog: ***"[Errno2] No such file or directory: 'etc/pil.data'"*** by pressing "**OK**" (you are about to create the missing file). When the HWR Editor comes up, select the "**Replace**" option from the "**File**" menu.

   If no errors occur at this point do step 3.

3. Click "**Yes**" in response to the dialog "***Replace current file with defaults?***", and

   Once the editor is populated with the new PIL file contents:

   Edit the values if desired, then click "**Save**". After this, select "**Close**" from the "**File**" menu. HWR is now ready to be run and/or configured.

   If an error listing pops up at this point do step 4.

4. If an error listing that starts with the lines ***"Error:#"*** **and** ***"Error Exception in Tk callback"***, (where # starts with 1 and increments by 1 for each bad file) and ends with the line *"**Error: Invalid line:"*** pops up, then there was an existing problem with an OB1 HWR station configuration that contains an illegal format (a blank line or the like), and the error has been propagated to the OB2 HWR configuration files.

   These errors must be corrected before the PIL file can be created successfully. Do the following:

a. Close the PIL editor and the error window.

b. From the OB2 HWR main panel, select **NWR** from the Product Setup area. "**Select**" and "**Load**" each product.

1. As each product is loaded, select the "**Station**" button to load the station product configuration file. Next:

2. Fix any errors in the configuration, and "**Save**" and "**Exit**" (selecting Save should check the existing file for configuration errors).

Next do step c to repeat the process for all NWWS Product Setups.

c. From the OB2 HWR main panel, select **NWWS** from the Product Setup area. "**Select**" and "**Load**" each product.

1. As each product is loaded, select the "**Station**" button to load the station product configuration file. Next:

2. Fix any errors in the configuration, then "**Save**" and "**Exit**" (selecting Save should check the existing file for configuration errors).

Now that in step 4, the bad Station setup file(s) for all NWR and NWWS products have been corrected, go back to the beginning (step 1) of the HWR procedure, and attempt to create the PILs file.

7. Rerun Localization for your backup sites (do as soon as possible)

This is reminder that you will need to rerun the localization for your backup sites as soon as practical. This must be done before you can go into backup mode. This should include WarnGen, WWA, full service backup, etc.

Please note that for the Watch Warning Advisory (WWA) program has a new way of running WWA for your backup site. This includes a localization. A document called WWA AWIPS OB2 Users Manual on the following web page has information on how to do this:

http://www.nws.noaa.gov/mdl/wwa/new_OB2.htm

8. Operational WFOs that use WarnGen need to customize their templates, train the staff, and activate the new templates

Before you do the following please be sure to do procedure 5 (Miscellaneous Post install procedures), steps B and C.

After the OB2 upgrade has been completed: For a while, sites will be able to use the OB1 WarnGen templates operationally.

However, over a reasonable period of time, sites should customize the OB2 WarnGen templates which were provided during the OB2 upgrade.

FSL has a document entitled ***Migration, testing, and training issues for OB2 WarnGen*** (http://www-sdd.fsl.noaa.gov/~ramer/noaa/ob2-wgn/ob2-setup.html) discusses a proposed migration strategy. It also discusses how to invoke a testing/training mode for the new OB2 features.

Important Information

The FSL document was written by a developer and it is possible that only the more advanced WarnGen people will understand it.

As a result, the information from the FSL document was rewritten by an SST member to make it more understandable. In addition, scripts were created, placed on NOAA1, and are referenced in the SST document. The SST document will be called ***OB2 WarnGen WFO Implementation Instructions*** and will be placed on the following web page:

http://www.ops1.nws.noaa.gov/awips_install.htm

WFOs **should** obtain this SST document and review it before they customized their OB2 WarnGen templates. Many may want to use the approach and scripts provided.

The following is an overview of what Operational WFOs should do to check, customize, test, and implement the OB2 WarnGen templates. As appropriate, it references the SST document or FSL webpages where more information can be found.

a. Set up one workstation (host) for testing, staff training, and WarnGen template customizing. See the SST document, steps 5 and 6, for one approach. Whatever hosting method you choose, be sure to do items in b-h, below.

b. Familiarize yourself with the default OB2 templates and how they operate before customizing them. Test the default templates to ensure they pass all VTEC and

QC checks. Also become familiar with “followup messaging” (see SST, steps 6 and 7). The following two FSL web pages discribes "followup messaging" in more detail.

1. *The Followup Capability in WarnGen* gives a writeup on the new follwup messaging feature in OB2:

   http://www-sdd.fsl.noaa.gov/~ramer/noaa/ob2-wgn/followUp.html

2. *Display examples for OB2 WarnGen* has useful screen captures:

   http://www-sdd.fsl.noaa.gov/~ramer/noaa/ob2-wgn/ob2-wgn.html

c. Customize the OB2 templates on the host WS (SST, step 8). When doing this, do not touch areas in the template that the developer tells you to avoid. Some information on OB2 WarnGen templates is found in the following two FSL web pages:

   1. *New OB2 templates*:
   http://www-sdd.fsl.noaa.gov/~ramer/noaa/ob2-wgn/templates.html

   2. *OB2 TextTemplate documentation*:
   http://www-sdd.fsl.noaa.gov/~ramer/noaa/ob2-wgn/TextTemplate.html

d. On the host WS, test the new customized templates to ensure that they perform as expected. Test the customized templates to ensure they pass VTEC and QC checks (SST step 7-9).

e. Train the staff so they become familiar with the new templates and WarnGen software (SST step 10). Each staff member can begin to become familiar with the QC and VTEC capabilities, but they need to remember that these two features will not become operational til December 2003. It is important to note that the staff will need to be familiar with the new "follow up" feature because it will be operational as soon the OB2 templates are activated.

f. Implement/activate the new OB2 templates. This entails 1) Removing OB1 templates which are active (e.g., in the /data/fxa/customFiles directory, etc.), 2) placing the customized OB2 templates into the /data/fxa/customFiles directory, and 3) running the appropriate localization (See SST #11).

g. Full service backup for WarnGen will continue to use the OB1 templates, unless these templates are removed from data/fxa/customFiles thus allowing the baseline OB2 templates to be used, or until the OB1 templates are updated with OB2 customized templates. The "followup capability" will be **different** if you use OB1 verses OB2 templates.

h. At a later time, you will be given more information on how the conversion to VTEC/QC in December 2003 will take place. Before this happens, site personnel should become familiar with the VTEC/QC capability.

i. An additional feature of OB2 is that the wwaConfig.template will now be supported in the /data/fxa/customFiles directory. You may want to move your customized wwaConfig.template from the localization/CCC directory into customFiles sometime after the upgrade.

9. Secure a Good Level 0 Archive as a Backup

As soon as possible after the upgrade, secure a good level 0 archive as a backup. Since the OB2 software is not compatible with any previously saved level 0 archive, please save a good level 0 archive from your OB2 system (at 12z or 00z).

To make a level 0 tape backup do the following. On ds1 as root type:

```
su - informix
export TERM=VT100
ontape -s -L 0
```

When finished, remove the tape from DS1 DAT tape drive and label it Release OB2 level 0, date it, then put in a safe place. Next, put a new scratch tape in DS1 DAT drive and label it "Release OB2."

10. Secure a Good LDAD Backup

LDAD executables and/or configuration files have been changed as a result of this installation. Therefore, once the installation has been completed, you have performed the after-installation procedures, and you are satisfied that your system is working correctly, you should generate a new LDAD backup. We suggest that this be done a week or so after the upgrade. Use System Administration Note 12 entitled “LDAD Backup and Restore Procedure.” This document can be found on the following web page:

http://www.oso3.nws.noaa.gov/awips_new.htm

11. Checking DS Server Failover Configuration

At some point a week or so after the upgrade, you should check to ensure that DS failover configurations are correct. Use the document entitled “Checking DS Server Failover Configuration.” If you don’t have a copy, it can be found with the other OB2 documentation at the following web page:

http://www.oso3.nws.noaa.gov/awips_softwre.htm

Attachment "a" - ROB1 LDAD and MSAS Files Automatically Overwritten During Parts 5 and 6

Attachment "a" Section A and Section B contains the ROB1 files that will be overwritten with OB2 versions during the OB2 LDAD and MSAS install, respectively, in Parts 5 and 6. The original OB1 files will be stored to /px2data/BACKUPLDADOB1

The following LDAD files will be updated (replaced) in OB2:

A. Below is the list of LDAD files to be updated in OB2. The ROB1 version of these files will be backed up to /px2data/BACKUPLDADOB1.

LDAD FILES:

AS:/awips/fxa/htdocs/cgi-bin/edit_file.pl
AS:/awips/fxa/htdocs/ldadAdmin-cgi/ldadAdmin.pl
/awips/fxa/ldad/bin/cleanMsg
/awips/fxa/ldad/bin/CO_serv
/awips/fxa/ldad/bin/check_reply
/awips/fxa/ldad/bin/cleanMsg
/awips/fxa/ldad/bin/createSessList.ksh
/awips/fxa/ldad/bin/faxSender.csh
/awips/fxa/ldad/bin/faxTclsh
/awips/fxa/ldad/bin/faxWish
/awips/fxa/ldad/bin/internalLDAD.install
/awips/fxa/ldad/bin/kill_tell_co
/awips/fxa/ldad/bin/listener
/awips/fxa/ldad/bin/newLDADdataNotification
/awips/fxa/ldad/bin/sendFax.tcl
/awips/fxa/ldad/bin/tell_co
/awips/fxa/ldad/bin/preprocessROSA.pl
/awips/fxa/ldad/data/gaugeSessList
/awips/fxa/ldad/data/logPref
/awips/fxa/ldad/data/userSessList
/ldad/bin/kill_tell_co
/ldad/bin/listener
/ldad/bin/newLDADdataNotification
/ldad/bin/rb
/ldad/bin/rc
/ldad/bin/rx
/ldad/bin/rz
/ldad/bin/sb
/ldad/bin/suaReceiver

/ldad/bin/sx
/ldad/bin/sz
/ldad/bin/tell_co
/ldad/bin/zcommandi
/ldad/bin/zcommand
/ldad/data/logPref

The following MSAS files will be updated (replaced) in OB2:

B. Here is the list of MSAS files to be updated. The ROB1 version of the replaced files will be saved to /data/fxa/BACKUPMSASOB1.

MSAS:
/awips/fxa/ldad/MSAS/WFOA_MSAS_QCstage1_2.run
/awips/fxa/ldad/MSAS/WFOA_MSAS_QCstage1_2_late.run
/awips/fxa/ldad/MSAS/WFOA_MSAS_Surface.run
/awips/fxa/ldad/MSAS/bin/asos.exe
/awips/fxa/ldad/MSAS/bin/create_MSAS_links.csh
/awips/fxa/ldad/MSAS/bin/qcstats.exe
/awips/fxa/ldad/MSAS/bin/qcstg1_2.exe
/awips/fxa/ldad/MSAS/bin/qcstg3.exe
/awips/fxa/ldad/MSAS/bin/sfcanl.exe
/awips/fxa/ldad/MSAS/bin/sfchqc.exe
/awips/fxa/ldad/MSAS/bin/sfcing.exe
/awips/fxa/ldad/MSAS/bin/sfcncdf.exe
/awips/fxa/ldad/MSAS/bin/sfcnmc.exe
/awips/fxa/ldad/MSAS/bin/sfcver.exe

Attachment "b" - Optional Procedures to Obtain Data During the Upgrade Via the WAN

There are two procedures in this attachment. The first is to obtain data, from the backup site via the WAN, while the upgrade is going on. The second allows the site to use the WAN to run XNOW at a backup site and examine the results.

1. Procedure to obtain data via the WAN during the install

Summary:

This procedure is designed to allow forecast offices to continue to use AWIPS to some degree during lengthy installations of major software builds/releases. Sites may wish to use this procedure in conjunction with service backup during the OB2 upgrade. You may wish to contact your AWIPS Regional Focal Point for Regional guidance.

This procedure will not be performed during periods of severe weather over either the forecast areas of the site being upgraded or the backup site. It should only be used during benign weather. Further, this procedure will tax the processing power of the backup sites workstation(s).

In coordination with a backup site, using one its workstations, the site being upgraded will log into the designated backup site's workstation. The upgrade site will then be able to obtain text, graphics, and limited image data over the wide area network (WAN), and continue producing routine forecast products.

Displays created on the backup site's workstation will be transmitted over the WAN to the upgrade site. Text and graphics displays are not as fast as it would be on your own AWIPS - there will be a time delay because of WAN bandwidth limitations. Image data is even slower.

The following instructions assume AKQ is the backup site whose workstation will be used for backup support. The workstation will be ws5-akq. The upgrade site is LWX and its workstation is ws4-lwx. The upgrade site will remotely log in and run a D2D session. These AWIPS identifiers are for illustration only. During actual use, substitute the actual identifiers of the backup and upgrade sites and workstations involved.

A. Setup Instruction at the backup site (AKQ)

Preliminary Setup Instructions for the ESA:

First, the backup site (AKQ) needs to do a second localization on the workstation to be used as the backup workstation. The second localization needs to be that of the upgrade site. In this example, the second localization is LWX.

To do so, the ESA must first verify that the /awips/fxa partition on the workstation to be used is no more than 85%. If the partition is >85%, the workstation already has a second localization on it. Choose another workstation, because a third localization could fill up the partition.

Then, as **fxa** on a workstation whose '/awips/fxa' partition is < 85%

```
cd /awips/fxa/data/localization/scripts
./mainScript.csh LWX
```

Note that the local site changes to the upgrade site, i.e., LWX, and will be remotely running the D2D.

Leave the Ingest site alone (Here it is AKQ since it is the site providing service backup. By not specifying the ingest site, it will default to ds1's ingest site which is AKQ)

After this localization, whenever you start D2D on this workstation, either locally at the AKQ workstation or remotely at the LWX workstation, the D2D initial display will allow you to choose the localization...AKQ or LWX. The local site (AKQ) still uses the AKQ localization while the remote site (LWX) will login and start D2D with the LWX localization. Both sites could be on line together, but with each localized to their site.

B. Setup Instructions at the upgrade site (LWX)

The upgrade site must do the following in order to run D2D remotely from AKQ

On the upgrade site workstation open a telnet session by right clicking on the background screen, then left clicking on "telnet".

Login in to your site (upgrade) as awipsusr (you will need your local password). Then set the display to your local workstation

```
setenv DISPLAY ws4-lwx:0.0
xhost +
```

Now, remotely log in to the backup site

```
rlogin  ws5-akq.er
```

You will need to enter the backup site's password at the prompt.

Then, as awipsusr on the backup site, set the display to your local workstation

```
setenv DISPLAY ws4-lwx.er:0.0
```

Now, start D2D

```
start-d2d &
```

Since the workstation has a second localization (LWX), starting D2D will allow you to select which localization to use.

Left click on the AKQ button, then left click on the LWX button. Finally, left click on the start button to start a D2D with the LWX localization.

D2D will take a while to come up (5 minutes for the main pane and ten minutes for all panes).

C. Shut down instructions at the upgrade site

Close D2D as you normally would. Then hit the enter key to retrieve the telnet prompt. Finally, type exit at the telnet prompt to disconnect your workstation from the remote site.

D. Additional Comments:

1. It is better not to have the backup site use the designated workstation. This allows a quicker response to the upgrade site. Also, if both sites run both heads, the probability is high that the system will shut down.
2. To bring up the Text Workstation, use the "Tools" pull down menu and left click on text window as you normally would.
3. Do not close the telnet window! If you do this, it will break the connection between the sites. It is best to iconize the telnet window.
4. Please keep in mind that the system can be very slow in this mode...be patient, particularly if you are retrieving images or a large number of graphics.

2. Procedure to Use XNOW VIA the WAN during the upgrade

During the upgrade, VIA the WAN, you may wish to run XNOW on a backup site's work-station and display results on your workstation. To do this, use the following sample procedure.

A. Setup Instruction at the backup site (AKQ)

Coordinate with the backup site and ensure the backup site's XNOW is configured to provide Service Backup for the upgrading site.

B. Setup Instructions to Use XNOW at the upgrade site (LWX)

The upgrade site must do the following in order to run **XNOW** remotely from AKQ.
On the upgrade site workstation open a telnet session by right clicking on the background screen, then left clicking on "telnet".

Login in to your site (upgrade) as **awipsusr** (you will need your local password). Then set the display to your local workstation

```
setenv DISPLAY ws4-lwx:0.1
```

0.1: means use the right screen
ws4: to use Workstation 4

```
xhost +
```

Now, remotely log in to the backup site (assumed to be ws5 at akq)

```
rlogin ws5-akq.er
```

You will need to enter the backup site's password at the prompt.

Then, as awipsusr on the backup site, set the display to your local workstation

```
setenv DISPLAY ws4-lwx.er:0.1
```

Now, start XNOW. Change directory to location of xnow.tcl and run.

```
cd /home/xnow/xnow/bin
```
(may be at a different location at other offices)
```
./xnow.tcl
```

C. Shut down instructions at the upgrade site

When you are done, shut down XNOW in the normal way.

Attachment "c" - A list of Some (Non-LDAD) Files Changed in OB2 (any site-added changes to these will be lost)

In Parts 0 -14, we point out files which may have customization/localization issues associated with them in OB2. The following are other files which are changed in OB2 which may also be "problem" customization/localization files. It is possible that after the upgrade, the site may have to merge customized changes back in.

The files in Section 1.0 deal with non-IFPS and non-LDAD files. For your information, Attachment "a" has information dealing with LDAD files.

1.0 List of non-IFPS files:

File Names and Runtime Directory names for AWIPS files which are changing in OB2 and which the sites might have changed will be listed below, if they become available.

Not available.

Attachment "d" - OB2 Freeware and COTS Changes

A. General comments on freeware changes

Usually with each new release of AWIPS there are upgrades with some of the public domain software packages. Sometimes new packages are also included. AWIPS includes freeware in the baseline almost exclusively in support of the national-provided applications. Sites writing local applications can either use the AWIPS-provided packages or download their own versions in the directories approved for local installations. Local applications choosing to use the AWIPS-provided freeware have to be cognizant of the fact that these versions may change per release. AWIPS maintains a web site where changes to the freeware for each upcoming release is posted. The URL for this site is:

http://isl715.nws.noaa.gov/awips/sw/cotsfree.html

NOTE: The web site has not been updated in a while. You may need to check this periodically.

Sites should be aware of the proposed changes for new AWIPS releases by reviewing the web site frequently or interacting with the LAWG. The AWIPS Software Engineering Group (SwEG) encourages feedback and comments on proposed changes to the freeware baseline.

Please note that AWIPS currently has a policy of including all its own freeware as a separate installation rather than rely on freeware that might come with the operating environment (OE) even if the versions that AWIPS uses and the OE provides are the same. This is to ensure AWIPS control over the stability of its software environment. With the advent of Linux, stability in the operating environment might be difficult to achieve given the rapid rate of Linux operating system upgrades and/or RedHat or other vendor operating environment upgrades. Therefore, AWIPS has opted to include all its own freeware and has instituted a policy for all national baselined software to restrict its use of freeware to the AWIPS provided versions.

B. Freeware changes for OB2

A summary of the freeware changes for OB2 can be found in the following table

Package	Old Version(OB1)	OB2 Version	Notes
Python megawidgets	0.8.5	1.1	HP and Linux
BWidget	none	1.4.1	Linux only

C. COTS changes for OB2

None.

Attachment “e” - Obtain OB2 WWA and WWA NWR Templates Before the OB2 Upgrade

The following must be done by operational WFOs only.

Go to the following webpage and review a document entitled ***"Watch, Warning, Advisory (WWA) Application Information Summary....New Features and Functions in AWIPS Build OB2 (****WWA-OB2-000-NEW****)."*** It summarizes the new features and functions in WWA in AWIPS Build OB2. This document also describes the changes made to OB2 WWA templates which you will want to become familiar with before you modify your OB2 templates below.

http://www.nws.noaa.gov/mdl/wwa/docs/WWA-OB2-000-NEW.pdf

Another web page contains a list of other MDL WWA web pages including the one listed above. This page contains links to the WWA User Manual and a document to be added which will include information on how to run WWA for your backup site...which is different in OB2.

http://www.nws.noaa.gov/mdl/wwa/new_OB2.htm

A number of WWA and WWA NWR templates are being delivered in OB2. Operational WFOs will want to obtain these before the OB2 upgrade and merge customized changes into them. If this is done ahead of time, then on the day you install OB2, a copy command will be executed in Part 4 which will take these templates and place them into the data/fxa/customFiles directory. The customized templates will over ride the OB2 baseline templates when the localization is run.

To download WWA and WWA NWR templates files follow the instructions below. After you download the templates to the safe subdirectory indicated, you can merge customized changes into them. These will remain in the safe directory until they are moved to their proper location on the day you install OB2.

The following table lists the WWA template files and WWA NWR template files that being delivered in OB2. The Procedure will allow you to download these from the NOAA1 server, below.

WWA Template Files delivered on OB2 CDs:

WWA_blizzard_wrn.preWWA	WWA_blodust_adv.preWWA	WWA_blodust_wrn.preWWA
WWA_blosnow_adv.preWWA	WWA_excheat_wrn.preWWA	WWA_exheat_wat.preWWA
WWA_exheat_wrn.preWWA	WWA_fog_adv.preWWA	WWA_freez_adv.preWWA
WWA_frost_adv.preWWA	WWA_frost_wrn.preWWA	WWA_frostfrz_outlk.preWWA
WWA_frostfrz_wat.preWWA	WWA_frzdrzl_adv.preWWA	WWA_frzfog_adv.preWWA
WWA_frzrain_adv.preWWA	WWA_frzrain_wrn.preWWA	WWA_heat_adv.preWWA
WWA_hiwind_wat.preWWA	WWA_hiwind_wrn.preWWA	WWA_hvysnow_wrn.preWWA
WWA_icestrm_adv.preWWA	WWA_icestrm_wrn.preWWA	WWA_lake_eff_adv.preWWA
WWA_lake_ef_wat.preWWA	WWA_lake_wind_adv.preWWA	WWA_redflag_wat.preWWA
WWA_redflag_wrn.preWWA	WWA_slt_adv.preWWA	WWA_slt_wrn.pre.WWA
WWA_smoke_adv.preWWA	WWA_snow_adv.preWWA	WWA_snow_blosn.preWWA
WWA_volash_adv.preWWA	WWA_volash_wrn.preWWA	WWA_wind_adv.preWWA
WWA_wintstrm_wat.preWWA	WWA_wintstrm_wrn.preWWA	WA_winwea_adv.preWWA
WWA_wndchil_adv.preWWA	WWA_wndchil_wat.preWWA	WWA_wndchil_wrn.preWWA

WWA NWR Template Files:

nwr_aircraft.preWWA	nwr_alert1.preWWA	nwr_alert2.preWWA
nwr_blizzard_wrn.preWWA	nwr_blodust_adv.preWWA	nwr_blodust_wrn.preWWA
nwr_blosnow_adv.preWWA	nwr_excheat_wrn.preWWA	nwr_exheat_wrn.preWWA
nwr_ffld_wat.preWWA	nwr_ffd_wrn.preWWA	nwr_flood_wat.preWWA
nwr_flood_wrn.preWWA	nwr_fog_adv.preWWA	nwr_freeze_wrn.preWWA
nwr_frost_wrn.preWWA	nwr_frzdrzl_adv.preWWA	nwr_frzrain_adv.preWWA
nwr_frzrain_wrn.preWWA	nwr_hazard_outlk_adv.preWWA	nwr_hiwind_wat.preWWA
nwr_hiwind_wrn.preWWA	nwr_hvysnow_wrn.preWWA	nwr_icestrm_adv.preWWA
nwr_icestrm_wrn.preWWA	nwr_pub_info.preWWA	nwr_rec_evt.preWWA
nwr_short.preWWA	nwr_slt_adv.preWWA	nwr_slt_wrn.preWWA
nwr_smoke_adv.preWWA	nwr_nsow_adv.preWWA	nwr_svrt_wat.preWWA
nwr_svrt_wrn.preWWA	nwr_tor_wat.preWWA	nwr_tor_wrn.preWWA
nwr_volash_adv.preWWA	nwr_volash_wrn.preWWA	nwr_wind_adv.preWWA
nwr_wintstrm_wat.preWWA	nwr_wintstrm_wrn.preWWA	nwr_winwea_adv.preWWA
nwr_wndchil_adv.preWWA	nwr_wndchil_wrn.preWWA	nwr_wsr88d.preWWA

Additional WWA Template Files:

NWS policy has changed the SPS & HWO products from non-segmented to segmented formats. To accommodate this need the following template files were updated:

WWA_head_outlook.preWWA	WWA_severe_outlook.preWWA	WWA_specialstmt.preWWA
WWA_ww_outlk.preWWA	WWA_frostfrz_outlk.preWWA	WWA_nonhazard_outlk.preWWA
WWA_hazard_outlk.preWWA	*WWA_hwo.preWWA	*WWA_sps.preWWA

A Download procedure to obtain the OB2 WWA and WWA NWR templates:

NOTE:	It is possible that some sites obtained the following procedure ahead of time and already downloaded the templates, customized them, and completed the rest of the procedure outlined below. If you are one of these sites, then obviously you do not need to do the following.

(1) From a workstation, open a telnet window, and login to the DS1 as root.

```
rlogin ds1 -l root
```

(2) Make a directory called data/local/ob2WWA

```
mkdir /data/local/ob2WWA
```

While we are at it, make a backup directory for the WWA customized files used in OB1. We will call this data/local/ob1WWA_bu

```
mkdir /data/local/ob1WWA_bu
```

(3) Go to the "/data/local/ob2WWA directory.

```
cd /data/local/ob2WWA
```

(4) Connect to the NOAA1 ftp server by entering the command:

```
ftp 165.92.25.15
```

Once you are connected to the NOAA1 ftp server, login as user **ftp**, with your email address as the password.

(5) Get the WWA template files from the NOAA1 ftp server by entering:

A. **binary**
B. **hash**
C. **prompt** (Use this only if you don't want to get prompts for each file)
D. **cd /pub/ob2WWA**
E. **mget ***
F. **bye**

(6) Do the following:

A. **`tar -xvf WWA*`**
B. **`chmod 775 *`**
C. **`chown fxa:fxalpha *`**

B. (1) If you haven't already done so, review the document entitled ***"Watch, Warning, Advisory (WWA) Application Information Summary....New Features and Functions in AWIPS Build OB2 (****WWA-OB2-000-NEW****)."*** It contains information on OB2 template changes.

(2) For each OB2 template downloaded /ob2WWA, compare the OB2 WWA templates with the WWA templates you are presently using. Use an editor of your choice and merge any customized changes **into the OB2 WWA templates in data/local/ob2WWA**.

> **IMPORTANT**
>
> Generally, we **highly recommend** that you merge the OB1 customized changes into the new OB2 templates. When you do this, ensure that you do not touch the new elements added to the OB2 templates!!

NOTE: Ensure that for each customized template active in OB1, you have an OB2 replacement ready in /data/local/ob2/WWA

C. Visually check the OB2 templates that you just customized to ensure they are correct.

NOTE: You will not be able to issue a test message using WWA/WWA NWR templates until after OB2 software has been installed.

D. Delete any templates from the **`/data/local/ob2WWA`** directory that you do not need to customize.

Note: It is important that you remove the OB2 templates from this directory that you do not need to customize. This is necessary because on the day you do the OB2 upgrade, a command will be executed in Part 4 that goes to the **`/data/local/ob2WWA`** directory and puts the templates present into the data/fxa/customFiles directory. A localization is run shortly afterwards which activate these templates.

E. Make a backup copy of the OB1 WWA templates presently active in data/fxa/customFiles and place them in data/local/ob1WWA_bu. These should include files of the type:

WWA*.preWWA
nwr*.preWWA
ccc-WWA*.preWWA ccc is localization site id
ccc-nwr*.preWWA

To do this go to the backup directory called ob1WWA_bu and execute the following copy commands:

```
cd /data/local/ob1WWA_bu
cp -p data/fxa/customFiles/WWA*.preWWA  .
cp -p data/fxa/customFiles/nwr*.preWWA     .
cp -p  data/fxa/customFiles ccc-WWA*.preWWA   .
                                Note:ccc is localization site id
cp -p  data/fxa/customFiles ccc-nwr*.preWWA  .
```

Check this by going into ob1WWA_bu and listing the files:

```
ll
```

Note: We made a backup copy of the files because on the day you do the OB2 upgrade, files of this type will be removed from customFiles as a precursor to copying the templates from ob2WWA into data/fxa/customFiles.

Attachment "f" - Pre-installation WarnGen Procedure

IMPORTANT

Operational WFOs must do the following procedure outlined in steps A through C.

The following procedure is needed to ensure that WarnGen templates active during OB1 remain operational after the OB2 Upgrade. This means we want to ensure that immediately after the OB2 install, AWIPS will initially be configured to use all OB1 WarnGen templates. We want this to be the case even though the new OB2 templates will reside in the data/fxa/nationalData directory after the OB2 upgrade.

A. Sites need to go to the WS for which they normally run WarnGen and that has their customized templates for WarnGen.

B. Each site needs to relocate by hand any WarnGen templates used for full service backup from localization/LLL into data/fxa//customFiles.

For example:
If your back up site is CTP and have customized CTP WarnGen templates like ws1:/awips/fxa/data/localization/CTP/CTP-wwa*preWWA,
and don't have these in /data/fxa/customFiles/CTP-wwa*preWWA, then you must move these into /customFiles.

Files like those in the example must first be moved into data/fxa/customFiles before running the script in the next step.

C. Obtain and run the FSL script called **ob2warngenprep.csh**; it is found on the NOAA1 server (see 1-5, below). FSL's script will copy any non-customized baseline WarnGen templates from data/fxa/nationalData/ into data/fxa/customFiles. After running this script /data/fxa/customFiles will contain the site's customized templates and the non-customized baseline WarnGen templates which existed during OB1. The printout of the script and information on what the script does is found in section 1 (***Steps to take before installation***) of the document entitled ***Migration, testing, and training issues for OB2 WarnGen*** is found on the following web page:

http://www-sdd.fsl.noaa.gov/~ramer/noaa/ob2-wgn/ob2-setup.html

Note that the script will also back up the OB1 WarnGen templates and some WarnGen configuration files into the following three directories on ds1:

/data/fxa/ob1-wgn/localization/LLL
will have *wwaConfig.template and *wwa*preWWA files from directory /awips/fxa/data/localization/LLL on the workstation where the script is run.

/data/fxa/ob1-wgn/customFiles
will have file makeWWAtables.patch from /awips/fxa/data/localization/LLL on the workstation where the script is run, will have file makeWWAtables.patch from /data/fxa/customFiles, will have all *wwa*preWWA files from /data/fxa/customFiles.

/data/fxa/ob1-wgn/localization/nationalData
will have file *wwaConfig.template and *wwa*preWWA files from ds1:/data/fxa/nationalData.

The FSL script was placed on the NOAA1 server in pub/ob2warngen/ob2warngenprep.csh. To obtain the script do the following:

(1) From the workstation you normally run WarnGen and that has your customized WarnGen templates, open a telnet window, log into the ws# as root, then switch to the FXA user.

```
rlogin ws# -l root
su - fxa
```

(2) Go to directory /awips/fxa/, create a directory called ob2warngen, then cd into that directory.

```
cd /awips/fxa
mkdir ob2warngen
cd ob2warngen
```

(3) Connect to the NOAA1 ftp server by entering the command:

```
ftp 165.92.25.15
```

Once you are connected, login as user **ftp**, with your email address as the password.

(4) There are several FSL scripts in the pub/ob2warngen directory on the NOAA1 ftp server. At this point, however, only download the ob2warngenprep.csh script. To obtain the script do the following:

a. **ascii**
b. **hash**
c. **cd /pub/ob2warngen**
d. **get ob2warngenprep.csh**
e. **bye**

(5) Set permissions.

a. **`chmod 775 obwarngenprep.csh`**
b. **`chown fxa:fxalpha obwarngenprep.csh`**

Run the **ob2warngenprep.csh** script, as user FXA type:

```
script  -a /home/ncfuser/ob2warngenprep.out
ob2warngenprep.csh
exit
```

General Information

The following is an outline of what you will need to do **after the OB2 upgrade**.

After the OB2 upgrade has been completed:

1. Sites will be able to use the OB1 WarnGen templates operationally.

2. Over a reasonable period of time, sites will be able to customize the OB2 WarnGen templates which will be provided with the OB2 installation. Instructions are available so that one of the WS hosts can be configured so it can quickly be converted from using the OB1 templates to using the OB2 templates and vice versa. That machine will be used to complete the OB2 customization process and to do user training.

   Once the training and customization are finished, the OB2 customized templates from that host will be transferred to the rest of the WS hosts on site.

   See Part 15, Procedure 8 (Operational WFOs that use WarnGen need to customize the OB2 templates, train the staff, and activate the new templates) for detailed information.

Attachment "g" - Preserving RPS List

Note: For the sake of the OB2 upgrade, sites will most likely want to examine sections 1 through 3 below.

1. Overview

This document describes how to create pre-localization radar specific RPS lists which will allow localization to correctly recreate the radar RPS lists. These pre-localization RPS lists should be stored in the /awips/fxa/data/localization/LLL directory where **LLL** is the AWIPS localization identifier for your AWIPS system.

The file name for the clear air RPS list will have the file name /awips/fxa/data/localization/LLL/**LLL-RRRR.clear-air** where **LLL** is the AWIPS localization identifier for your AWIPS site and **RRRR** is the 4 letter identifier for the radar.

The file name for the storm RPS list will have the file name /awips/fxa/data/localization/LLL/**LLL-RRRR.storm** where **LLL** is the AWIPS localization identifier for your AWIPS site and **RRRR** is the 4 letter identifier for the radar.

2. Introduction

The site specific/radar specific RPS lists are recreated by the -auxFiles option in the mainScript.csh script. The -auxFiles option uses:

a. the **generic** /awips/fxa/data/KXXX.clear-air file to recreate the radar specific clear air RPS lists in the /data/fxa/radar/lists directory.

b. the **generic** /awips/fxa/data/KXXX.storm file to recreate the radar specific storm RPS lists in the /data/fxa/radar/lists directory.

The AWIPS site at WFO BUF has a dedicated connection to 2 radars: the KBUF radar and the KTYX radar. When an ***./mainScript.csh -auxFiles*** localization is run on the BUF AWIPS system:

a. the generic /awips/fxa/data/**KXXX.clear-air** file is used to recreate the radar specific /data/fxa/radar/lists/**KBUF.clear-air** and the /data/fxa/radar/lists/**KTYX.clear-air** RPS lists.

b. the generic /awips/fxa/data/**KXXX.storm** file is used to recreate the radar specific /data/fxa/radar/lists/**KBUF.storm** and the /data/fxa/radar/lists/**KTYX.storm** RPS lists.

IMPORTANT

Because most AWIPS sites have customized the site specific/radar specific RPS lists it is **undesirable** to allow the ***./mainScript.csh -auxFiles*** localization to use the generic KXXX.clear-air and KXXX.storm files as the source files creating radar specific RPS lists.

The **KBUF radar** is an NWS radar and the BUF AWIPS system has a LAN-to-LAN interface to the KBUF radar. The LAN-to-LAN interface allows the BUF AWIPS system to include up to 65 products in the RPS lists which are sent to the KBUF radar.

The **KTYX radar** is a DoD radar and the BUF AWIPS system has an X.25 interface to the KTYX radar. The line speed of this X.25 interface is 14.4K which allows BUF AWIPS system to include up to 31 products in the RPS lists which are sent to the KTYX radar.

WFO BUF's RPS list for the KBUF radar will be **different** than the RPS list for the KTYX radar because the radar interfaces support a different maximum number of products. The KBUF LAN-to-LAN interface supports up to 65 products while the KTYX X.25 interface only supports up to 31 products. Additionally, the KBUF LAN-to-LAN connection is fast enough to support the 8-bit radar products therefore BUF would want to include the 8-bit Reflectivity Array and 8-bit Velocity Array products in the KBUF.storm RPS list. The KTYX X.25 interface is not fast enough to support the 8-bit radar products therefore BUF would want not want to include the 8-bit Reflectivity Array and 8-bit Velocity Array products in the KTYX.storm RPS list.

3. Creating radar specific pre-localization RPS lists

To create radar specific pre-localization RPS lists, the radar specific RPS lists in the /data/fxa/radar/lists directory will be copied to the /awips/fxa/data/localization/LLL directory. The site/radar specific /data/fxa/radar/lists/**RRRR.clear.air** file will be copied to the /awips/fxa/data/localization/LLL/**LLL-RRRR.clear-air** file. The site/radar specific /data/fxa/radar/lists/**RRRR.storm** file will be copied to the /awips/fxa/data/localization/LLL/**LLL-RRRR.storm** file. The generic format of the copy commands would be:

```
cp -p /data/fxa/radar/lists/RRRR.clear.air /awips/fxa/data/localization/LLL/LLL-RRRR.clear-air
cp -p /data/fxa/radar/lists/RRRR.storm /awips/fxa/data/localization/LLL/LLL-RRRR.storm
```

Using WFO BUF as an example:

For the first radar, KBUF:

BUF has customized the /data/fxa/radar/lists/KBUF.clear-air and the /data/fxa/radar/lists/KBUF.storm files to meet their requirements for the KBUF radar. BUF would issue the following commands on all servers and workstations as the **fxa** user to create their KBUF pre-localization RPS lists:

```
cp -p /data/fxa/radar/lists/KBUF.clear.air /awips/fxa/data/localization/BUF/BUF-KBUF.clear-air
cp -p /data/fxa/radar/lists/KBUF.storm /awips/fxa/data/localization/BUF/BUF-KBUF.storm
```

Once the /awips/fxa/data/localization/BUF/BUF-KBUF.clear-air file is established, the ***./mainScript.csh -auxFiles*** localization will use the BUF-KBUF.clear-air file to recreate the /data/fxa/radar/lists/KBUF.clear-air RPS file.

Once the /awips/fxa/data/localization/BUF/BUF-KBUF.storm file is established, the ***./mainScript.csh -auxFiles*** localization will use the BUF-KBUF.storm file to recreate the /data/fxa/radar/lists/KBUF.storm RPS file.

For the second radar, KTYX:

BUF has customized the /data/fxa/radar/lists/KTYX.clear-air and the /data/fxa/radar/lists/KTYX.storm files to meet their requirements for the KTYX radar. BUF would issue the following commands on all servers and workstations as the **fxa** user to create their KTYX pre-localization RPS lists:

```
cp -p /data/fxa/radar/lists/KTYX.clear.air /awips/fxa/data/localization/BUF/BUF-KTYX.clear-air
cp -p /data/fxa/radar/lists/KTYX.storm /awips/fxa/data/localization/BUF/BUF-KTYX.storm
```

Once the /awips/fxa/data/localization/BUF/BUF-KTYX.clear-air file is established, the ***./mainScript.csh -auxFiles*** localization will use the BUF-KTYX.clear-air file to recreate the /data/fxa/radar/lists/KTYX.clear-air RPS file.

Once the /awips/fxa/data/localization/BUF/BUF-KTYX.storm file is established, the ***./mainScript.csh -auxFiles*** localization will use the BUF-KTYX.storm file to recreate the /data/fxa/radar/lists/KTYX.storm RPS file.

IMPORTANT

It is important that the /awips/fxa/data/localization/LLL/LLL-RRRR.clear-air file and the /awips/fxa/data/localization/LLL/LLL-RRRR.storm file be updated on all servers and workstations. When installing OB1 software, the localization is run on the ds1 server and the resulting localization files are pushed from ds1 to the remaining servers and workstations. When installing OB2 software, the localization is run on the lx1 server and the resulting localization files are pushed from lx1 to the remaining servers and workstations.

4. Keeping the pre-localization RPS lists accurate

If the default RPS lists are **modified** by using the procedure in the System Managers Manual 16.1, save a copy of the updated RPS lists to the pre-localization RPS list file. SMM 16.1 provides instructions for updating the default /data/fxa/radar/lists/RRRR.clear-air and the /data/fxa/radar/lists/RRRR.storm RPS list files using the RPS List Editor. After the default RPS lists are updated, the corresponding /awips/fxa/data/localization/LLL/LLL-RRRR.clear-air and /awips/fxa/data/localization/LLL/LLL-RRRR.storm files should also be updated on all servers and workstations. The generic format of the copy commands would be:

```
cp -p /data/fxa/radar/lists/RRRR.clear.air /awips/fxa/data/localization/LLL/LLL-RRRR.clear-air
cp -p /data/fxa/radar/lists/RRRR.storm /awips/fxa/data/localization/LLL/LLL-RRRR.storm
```

IMPORTANT

It is important that the /awips/fxa/data/localization/LLL/LLL-RRRR.clear-air file and the /awips/fxa/data/localization/LLL/LLL-RRRR.storm file be updated on all servers and workstations.